Strong. Smart. Beautiful.

E7X-01 ELLIPTICAL TRAINER SERVICE MANUAL

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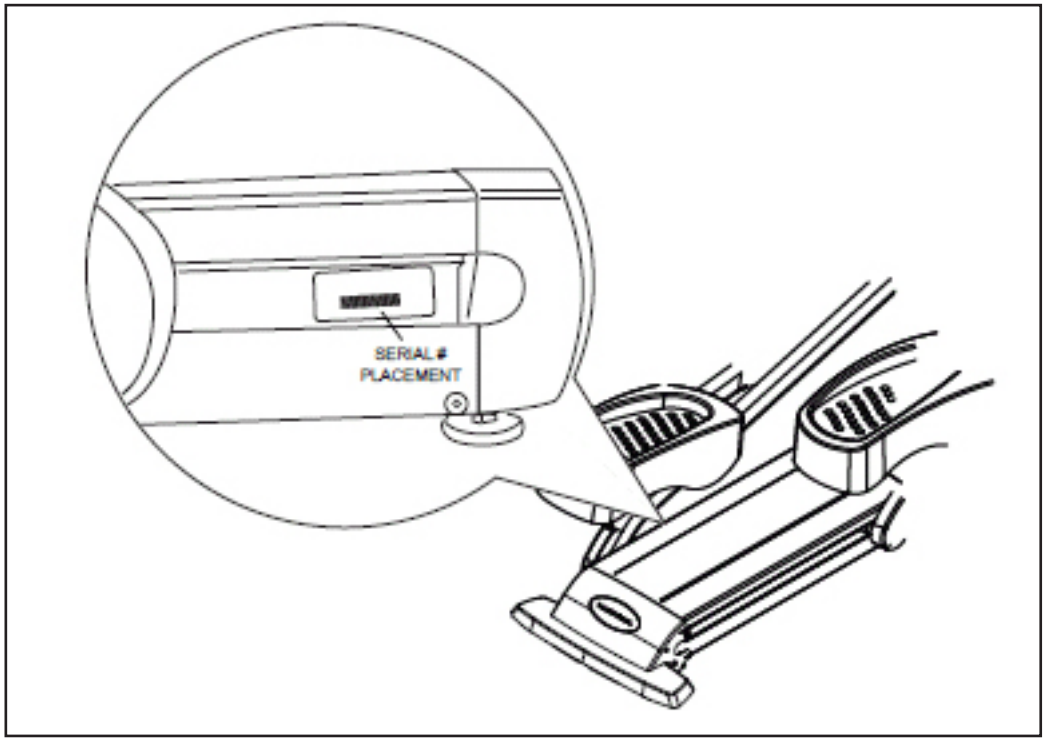
CHAPTER 1: SERIAL NUMBER LOCATION

1.1 SERIAL NUMBER LOCATION



CHAPTER 1: SERIAL NUMBER LOCATION

1.1 SERIAL NUMBER LOCATION - CONTINUED

CONSOLE SERIAL NUMBER LOCATION

CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.1 READ AND SAVE THESE INSTRUCTIONS

This Elliptical Trainer is intended for commercial use. To ensure your safety and protect the equipment, read all instructions before operating the MATRIX Elliptical Trainer.

When using an electrical product, basic precautions should always be followed including the following:

- ***An appliance should never be left unattended when plugged in. Unplug the unit from the outlet when not in use and before putting on or taking off any parts.***
- ***This product must be used for its intended purpose described in this service manual. Do not use other attachments that are not recommend by the manufacturer. Attachments may cause injury.***
- ***To prevent electrical shock, never drop or insert any object into any opening.***
- ***Do not remove the console covers. Service should only be done by an authorized service technician.***
- ***Do not carry this unit by it's supply cord or use the cord as a handle.***
- ***Close supervision is necessary when the Elliptical Trainer is used by or near children or disable persons.***
- ***Do not use outdoors.***
- ***Do not operate where aerosol (spray) products are being used or when oxygen is being administered.***
- ***To disconnect, turn all controls to the off position, then remove the plug from the outlet.***
- ***Do not use the equipment in any way other than designed or intended by the manufacturer. It is imperative that all Matrix Fitness Systems equipment is used properly to avoid injury.***
- ***Keep hands and feet clear of moving parts at all times to avoid injury.***
- ***Unsupervised children must be kept away from this equipment.***
- ***Do not wear loose clothing while on the equipment.***

CAUTION! ***If you experience chest pains, nausea, dizziness, or shortness of breath, stop exercising immediately and consult your physician before continuing.***

CAUTION! ***Any changes or modifications to this equipment could void the product warranty.***

2.2 ELECTRICAL REQUIREMENTS

The Matrix E7x-01 Elliptical Trainer can operate without power; however, the machine must boot the software with each new user. This can mean a delay of up to 35 seconds while the machine's operating system prepares for a workout. It's similar to turning your cell phone on for the first time of the day. These units can also be AC powered. This will power the console at all times and requires no minimum RPM for operation. A powered product lowers the starting resistance and is easier to use for beginners. These units can be daisy chained together, up to 4 units per dedicated 15 amp circuit, using a Matrix daisy chain cord adapter (sold separately).

For your safety and for the performance of your Matrix Elliptical Trainer, the ground on your circuits must be non looped. Please refer to NEC articles 210-21 and 210-23. Any alterations to the standard Matrix power cords will void all warranties.

GROUNDING INSTRUCTIONS:

The Matrix E7x-01 Elliptical Trainer must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The Elliptical Trainer is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. If the user does not follow these grounding instructions, the user could void the Matrix limited warranty.

DANGER: Improper connection of the equipment grounding conductor can result in the risk of electric shock. Check with a qualified electrician if the user is in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet, have a proper outlet installed by an electrician

CHAPTER 3: PREVENTATIVE MAINTENANCE

3.1 RECOMMENDED CLEANING TIPS

Preventative maintenance and daily cleaning will prolong the life and look of your MATRIX Elliptical Trainer.

Please read and follow these tips.

- Position the equipment away from direct sunlight. The intense UV light can cause discoloration on plastics.
- Locate your equipment in an area with cool temperatures and low humidity.
- Clean with a soft 100% cotton cloth.
- Clean with soap and water or other non-ammonia based all purpose cleaners.
- Wipe foot pads, handles, heart rate grips, and handlebars clean after each use.
- Do not pour liquids directly onto your equipment. This can cause damage to the equipment and in some cases electrocution.
- Check pedal motion and stability.
- Adjust leveling feet when equipment wobbles or rocks.
- Maintain a clean area around equipment, free from dust and dirt.

3.2 CHECK FOR DAMAGED PARTS

DO NOT use any equipment that is damaged or has worn or broken parts. Use only replacement parts supplied by Matrix Fitness Systems.

MAINTAIN LABELS AND NAMEPLATES. Do not remove labels for any reason. They contain important information. If unreadable or missing, contact Matrix Fitness Systems for a replacement. 1-866-693-4863, www.matrixfitness.com

MAINTAIN ALL EQUIPMENT Preventative maintenance is the key to smooth operating equipment. Equipment needs to be inspected at regular intervals. Defective components must be replaced immediately. Improperly working equipment must be kept out of use until it is repaired. Ensure that any person(s) making adjustments or performing maintenance or repair of any kind is qualified to do so. Matrix Fitness Systems will provide service and maintenance training at our corporate facility upon request or in the field if proper arrangements are made.

CHAPTER 3: PREVENTATIVE MAINTENANCE

3.3 CARE AND MAINTENANCE INSTRUCTION

In order to maximize life span, and minimize down time, all MATRIX equipment requires regular cleaning, and maintenance items performed on a scheduled basis. This section contains detailed instructions on how to perform these items, the frequency of which they should be done, and a check list to sign off each time service is completed for a specific machine. Some basic tools and supplies will be necessary to perform these tasks which include (but may not be limited to):

* Metric Allen wrenches
* #2 Phillips head screwdriver
* Adjustable wrench
* Torque wrench (capability to read foot lbs, and inch lbs)
* Lint free cleaning cloths
* Teflon based spray lubricant
* Mild, water soluble, detergent – such as “Simple Green”, or other Matrix approved product
* Teflon based spray lubricant such as “Super Lube”, or other Matrix approved product
* Vacuum cleaner with an extendable hose and crevasse tool attachment

You may periodically see addendums to this document, as the Matrix Technical Support Team identifies items that require specific attention, the latest version will always be available on the Matrix web site, www.matrixfitness.com

DAILY MAINTENANCE ITEMS

1) Look and listen for loose fasteners, unusual noises, and any other indications that the equipment may be in need of service.

2) Clean the elliptical trainer before and after each use, including:
a. Use a damp, soft cloth with water or mild liquid detergent to clean all exposed surfaces. DO NOT use ammonia, chlorine, or any acid based cleaners.
b. Keep the console display free of fingerprints and salt build up caused by sweat.
c. Frequently vacuum the floor beneath the unit to prevent the accumulation of dust and dirt which can affect the smooth operation of the unit.

MONTHLY MAINTENANCE ITEMS

1) Inspect the console, handrails, link arms, pedal arms, and pedals for damage.

2) Check the link / pedal arms for loose joints, tighten hardware as needed.

3) Check pedal motion and stability.

4) Adjust leveling feet if the equipment rocks or wobbles.

5) Remove the rear shroud, and clean the rollers / tracks to prevent flat spots caused by dust / dirt.

QUARTERLY MAINTENANCE ITEMS

1) Remove the front shrouds and check belts for damage, alignment, and proper tension.

CHAPTER 4: CONSOLE OVERLAY AND WORKOUT DESCRIPTION

4.1 CONSOLE DESCRIPTION

MULTI-PURPOSE KEYS: Keys have different functions depending on each screen.

GO: One touch Start.

ENTER: To confirm each program setting.

UP / DOWN LEVEL: Easy information and level selection.

UP / DOWN TIME: Easy information and time adjustment.

STOP: Ends workout and shows workout summary data.

NUMBER KEYPAD: Workout data input for workout setup. Level adjustment during workout.

COOL DOWN: Puts the Elliptical Trainer into Cool Down Mode.

FAN: Allows for fan speed selection (fan has 3 operating speeds).

E7X-01 ENTERTAINMENT ZONE

IPOD®: Will take the user directly to the iPod screen to allow for iPod control and play list selection.

VOLUME UP / DOWN: Adjusts the volume output through the headphone jack of either integrated console TV or iPod output.

NUMBER KEYPAD: Allows for easy TV channel selections.

CHANNEL UP / DOWN: Allows for channel selection.

DISPLAY MODE: Allows user to cycle through console display options, iPod, TV, or profile display.

LAST CHANNEL: Allows the user to cycle between the current channel and the previous channel they were viewing.

CHAPTER 4: CONSOLE OVERLAY AND WORKOUT DESCRIPTION

4.2 WORKOUT SETUP STEPS - MANUAL

GO - Press to immediately begin a workout. Workout, resistance level, and time will automatically go to default settings. Pressing GO will not prompt user for age, weight, or level settings.

1) Start pedaling and press the GO key to begin your workout. 2) The display will read 3, 2, 1, Begin and then the program will start.

MANUAL - Manual allows the user to input more information while defining their own workout. Calorie expenditure will be more accurate when inputting information in Manual than by pressing GO.

1) Start pedaling and press the key next to MANUAL on the display.
2) Select the key next to Level and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

4.3 WORKOUT SETUP STEPS - FAT BURN

FAT BURN - Fat burn is a level based program that is designed to help users burn fat through various resistance level changes.

1) Start pedaling and press the key next to FAT BURN on the display.
2) Select the key next to Level and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

4.4 WORKOUT SETUP STEPS - TRAINING WORKOUTS

ROLLING HILLS - The Rolling Hills program is a level based program that automatically adjusts the resistance level to simulate real terrain.

1) Start pedaling and press the key next to TRAINING WORKOUTS on the display, and then press the key next to ROLLING HILLS.
2) Select the key next to Level and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

INTERVALS - The Intervals program is a level based program that automatically adjusts the resistance of the machine from low to high intensity settings at regular intervals.

1) Start pedaling and press the key next to TRAINING WORKOUTS on the display, and then press the key next to INTERVAL TRAINING.
2) Select the key next to Level and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

RANDOM - Random is a level based workout that randomly adjusts the resistance of the machine.

1) Start pedaling and press the key next to TRAINING WORKOUTS on the display, and then press the key next to RANDOM.
2) Select the key next to Level and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

4.5 WORKOUT SETUP STEPS - COOPER FITNESS TEST

FITNESS TEST -The Cooper Fitness Test measures cardiovascular fitness and proves an estimated sub-maximal VO2 result. It is based on power output according to ACSM standards and was developed by the Cooper Institute© (www.cooperinstitute.org). User RPMs must remain between 60-80 RPM during the test. The test will end when the user can no longer maintain this speed. Use of a heart rate strap is optional but provides more data.

The test starts at a low intensity level and gradually increases in intensity (difficulty) every 2 minutes. As it increases, the user must maintain 60-80 RPM to advance to the next level. The test could take upwards of 30+ minutes for very fit individuals. Once the test ends a recovery period (cool down) will begin and the user's results are calculated and displayed. Results are based on the number of stages completed. Incline will not be adjustable during the test.

1) Start pedaling and press the key next to FITNESS TEST on the display.
2) Select the key next to Age and follow the prompts to set.
3) Select the key next to Gender and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.
6) Once the workout is complete, the display will read the results of the Fitness Test.

STAGE COMPLETE:

1	Well Below Average
2	Well Below Average
3	Below Average
4	Below Average
5	Average
6	Average
7	Above Average
8	Above Average
9+	Well Above Average

4.6 WORKOUT SETUP STEPS - TARGET HEART RATE

TARGET HEART RATE - The Matrix Elliptical Trainer comes with standard digital contact heart rate sensors and are POLAR telemetry compatible. The heart rate control workout mode allows the user to program their desired heart rate zone, and the Elliptical Trainer will automatically adjust the level based upon the user's heart rate. The heart rate zone is calculated using the following equation: (220-Age)8%=target heart rate zone. The user must wear a POLAR telemetric strap or continually hold onto the contact heart rate grips for this workout.

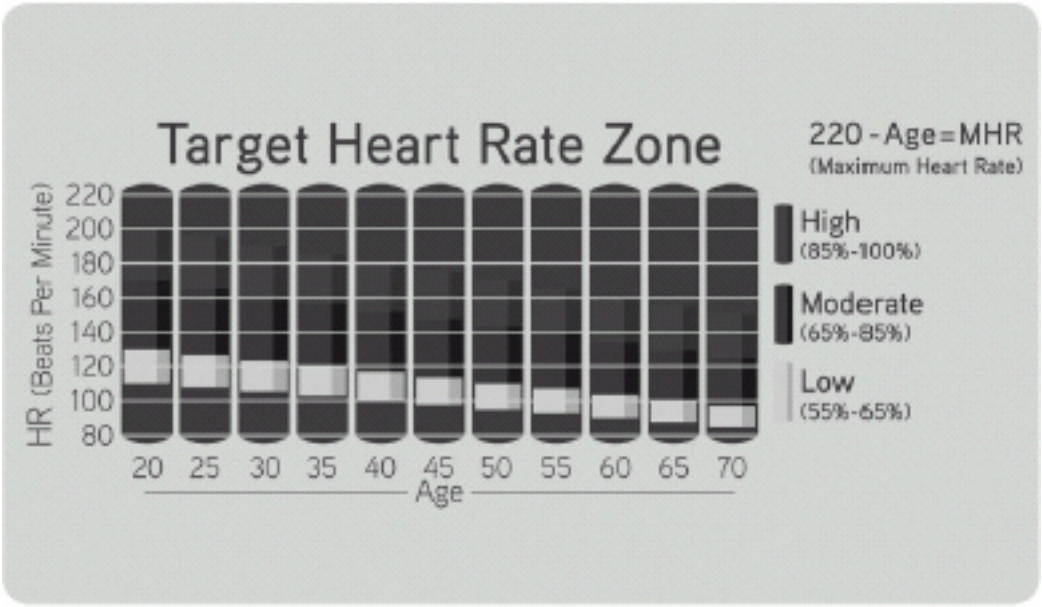
Locate the metal sensors on the handlebars of the Elliptical Trainer. Notice that there are two separate pieces of metal on each grip. You must be making contact with both pieces of each grip to get an accurate heart rate reading. You can grab these sensors in any program to view your current heart rate.

1) Start pedaling and press the key next to TARGET HEART RATE on the display.
2) Select the key next to Age and follow the prompts to set.
2) Select the key next to Percent of HR and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.

4.7 WORKOUT SETUP STEPS - CONSTANT WATTS

CONSTANT WATTS - Constant Watts is a unique program that allows you to vary your cadence or RPM and the Elliptical Trainer's resistance level will adjust accordingly to your selected goal. The quicker you pedal, the less resistance for the goal selected.

1) Start pedaling and press the key next to CONSTANT WATTS on the display.
2) Select the key next to Watts and follow the prompts to set.
3) Select the key next to Time and follow the prompts to set. .
4) Select the key next to Weight and follow the prompts to set.
5) Select the key next to GO and the display will read 3, 2, 1, and then the program will begin.



CHAPTER 5: MANAGER MODE

5.1 MANAGER MODE OVERVIEW

The Manager's Custom Mode allows the club owner to customize the Elliptical Trainer for the club.

1) To enter Manager Mode, press ENTER, 1, 0, 0, 1, ENTER on the upper display. Manager Mode will appear on the display (Figure A).

2) Select the key next to the setting that needs to be changed, and follow the prompts to change.

3) Press the ENTER key once the desired setting is correct to save.

4) Press HOME or press and hold the STOP key for 3-5 seconds to return to normal operation.

FIGURE A

5.2 MANAGER MODE - ABOUT TAB

MANAGER MODE
About

FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Versions	Software version.	Cannot be modified.
Key Sound Default: On	Controls whether there is a key sound when a key is pressed and whether it is a beep or through the speakers.	On / Off
Out of Order Default: Off	This option allows the club to put the console into an "out of order" status.	On / Off

5.3 MANAGER MODE - TIME TAB

MANAGER MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Time	Maximum Time Default: 60 Minutes	This option allows the club to set the maximum workout duration limits during peak and non peak hours.	Maximum: 99 Minutes Minimum: 5 Minutes
	Pause Time Default: 5 Minutes	This option controls the default pause time.	Maximum: 10 Minutes Minimum: 1 Minute

5.4 MANAGER MODE - DEFAULTS TAB

MANAGER MODE	FUNCTION & DEFAULTS	DESCRIPTION	MODIFIED
Defaults	Level Default: 1	This option controls the default program level.	Maximum: 1 Minimum: 20
	Age Default: 30	This option controls the default user's age used in the target HR calculations.	Maximum: 100 Minimum: 10
	Weight Default: 150 lbs / 68 kg	This option controls the default weight used in the calorie calculations. Displayed in pounds or kilograms.	Maximum: 400 lbs / 180 kg Minimum: 80 lbs / 36 kg
	Gender Default: Male	Setting the user as Male or Female.	Male or Female
	Time	This option controls the default program time.	Maximum: Max Time Setting Minimum: 5 Minutes.

5.5 MANAGER MODE - LANGUAGE TAB

MANAGER MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Language	Select default language.	This option allows the user to select a flag for a specific language.	N/A

LANGUAGE	FLAG	UNIT
English		Mile
		Mile
		KM
German		KM
		KM

LANGUAGE	FLAG	UNIT
Spanish		KM
		KM
Dutch		KM
Italian		KM
Japanese		KM

LANGUAGE	FLAG	UNIT
Chinese		KM
		KM
Portuguese		KM
		KM
French		KM

5.6 MANAGER MODE -TV TAB

MANAGER MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
TV	Channel Default: 1	This option controls the default TV channel on start up.	Channels 1-999
	Volume Default: 1	This option controls the default TV volume on start up.	Maximum: 17 Minimum: 1
	Channel Scan	This option scans the local TV system for channels.	N/A
	External TV Default: Off	This option controls the external TV power.	On / Off

CHAPTER 6: ENGINEERING MODE

6.1 ENGINEERING MODE OVERVIEW

The Engineering Mode allows the club owner to keep track of the technical settings and error history for the Elliptical Trainer.

1) To enter Engineering Mode, press ENTER, 2, 0, 0, 1, ENTER on the upper display. Engineering Mode will appear on the display (Figure A).

2) Select the key next to the setting that needs to be changed, and follow the prompts to change.

3) Press the ENTER key once the desired setting is correct to save.

4) Press HOME or press and hold the STOP key for 3-5 seconds to return to normal operation.

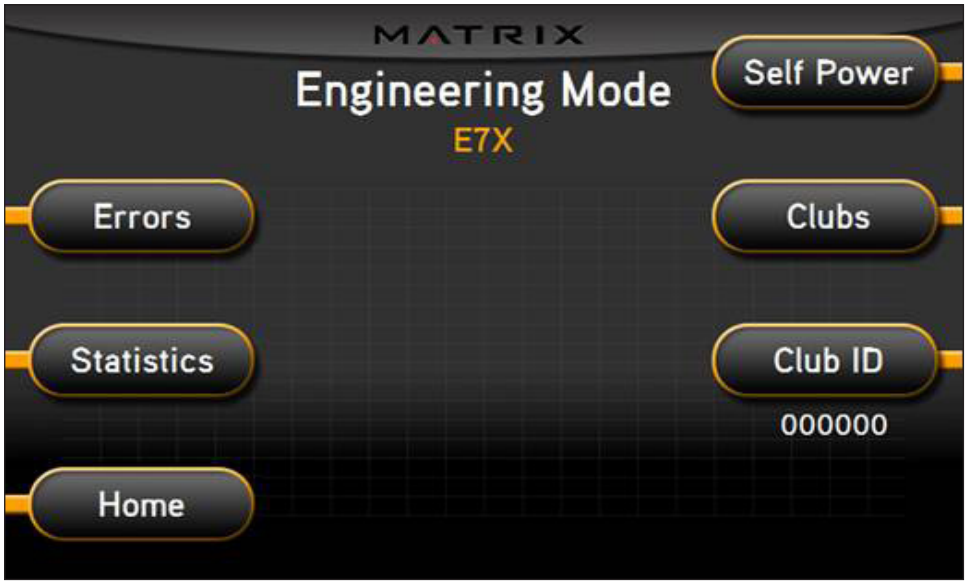
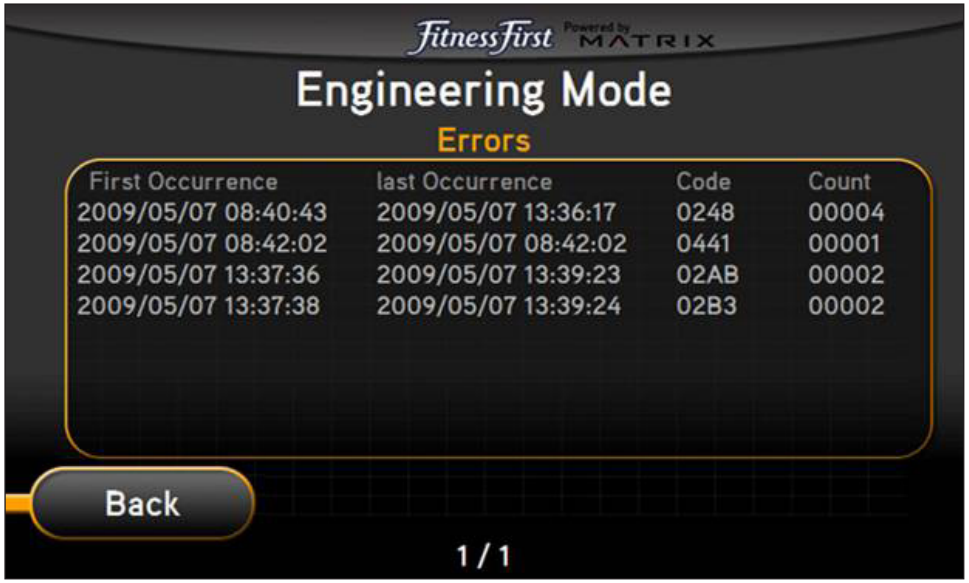


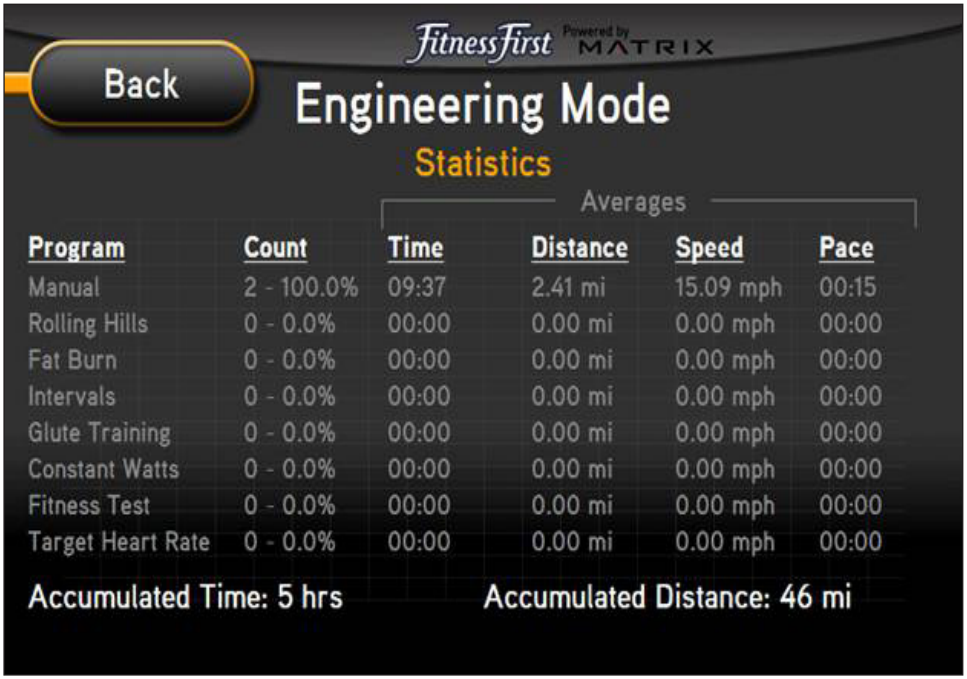
FIGURE A

6.2 ENGINEERING MODE - ERRORS TAB



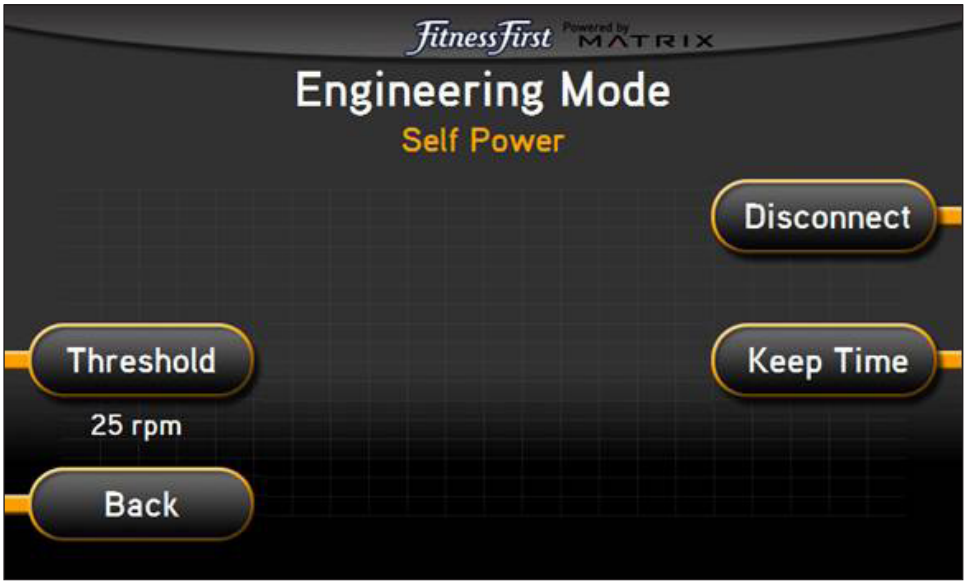
ENGINEERING MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Errors		This option displays the error code history.	N/A

6.3 ENGINEERING MODE - STATISTICS TAB


FitnessFirst Powered by MATRIX
Back
Engineering Mode
Statistics
Averages
Program Count Time Distance Speed Pace
Manual 2 - 100.0% 09:37 2.41 mi 15.09 mph 00:15
Rolling Hills 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Fat Burn 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Intervals 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Glute Training 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Constant Watts 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Fitness Test 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Target Heart Rate 0 - 0.0% 00:00 0.00 mi 0.00 mph 00:00
Accumulated Time: 5 hrs
Accumulated Distance: 46 mi

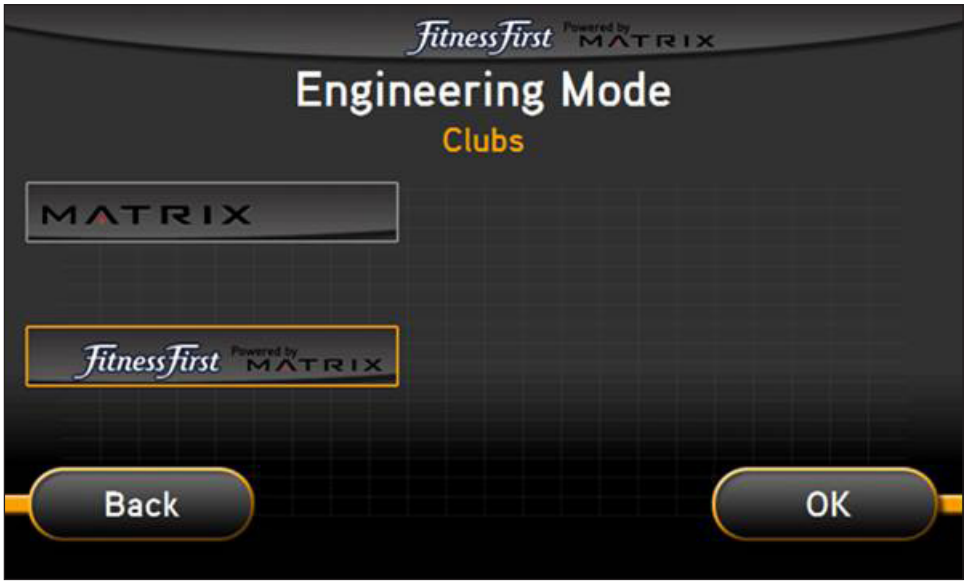
ENGINEERING MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Statistics		This option displays the workout information for the unit.	N/A

6.4 ENGINEERING MODE - SELF POWER TAB



ENGINEERING MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
Self Power	Threshold Default: 25 RPM	This option controls the minimum RPM limits for operation.	25 - 60 RPM
	Disconnect	This option controls the minimum RPM limit to operate other functions when no power is present.	20 - 60 RPM
	Keep Time	This option controls how long the console keeps information after the minimum RPM threshold is not met.	Home: 60 Seconds Run: 30 Seconds Summary: 30 Seconds

6.5 ENGINEERING MODE - CLUBS TAB



ENGINEERING MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
	Clubs Default: MATRIX	This option allows the club to select a screen header from a list.	N/A

6.6 ENGINEERING MODE - CLUB ID TAB

ENGINEERING MODE	FUNCTION & DEFAULTS	DESCRIPTIONS	MODIFIED
	Club ID	This option records the Club ID of the fitness facility.	N/A

CHAPTER 7: SERVICE MODE

7.1 SERVICE MODE OVERVIEW

The Service Mode allows an authorized service provider to test and store information on the Elliptical Trainer.

1) To enter Service Mode, press ENTER, 3, 0, 0, 1, ENTER on the upper display. Service Mode will appear on the display (Figure A).

2) Select the key next to the setting that needs to be changed, and follow the prompts to change.

3) Press the ENTER key once the desired setting is correct to save.

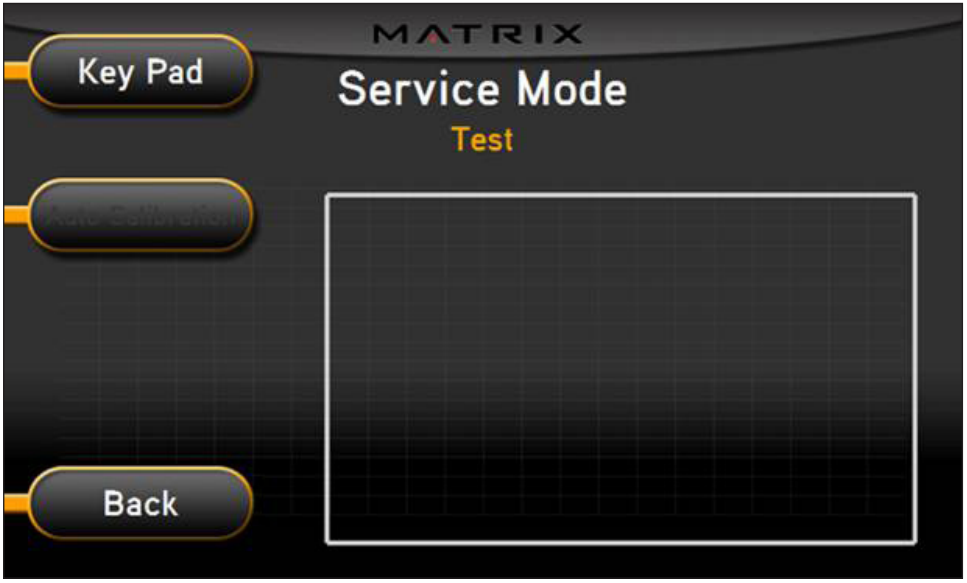
4) Press HOME or press and hold the STOP key for 3-5 seconds to return to normal operation.

FIGURE A

7.2 SERVICE MODE - SETUP TAB

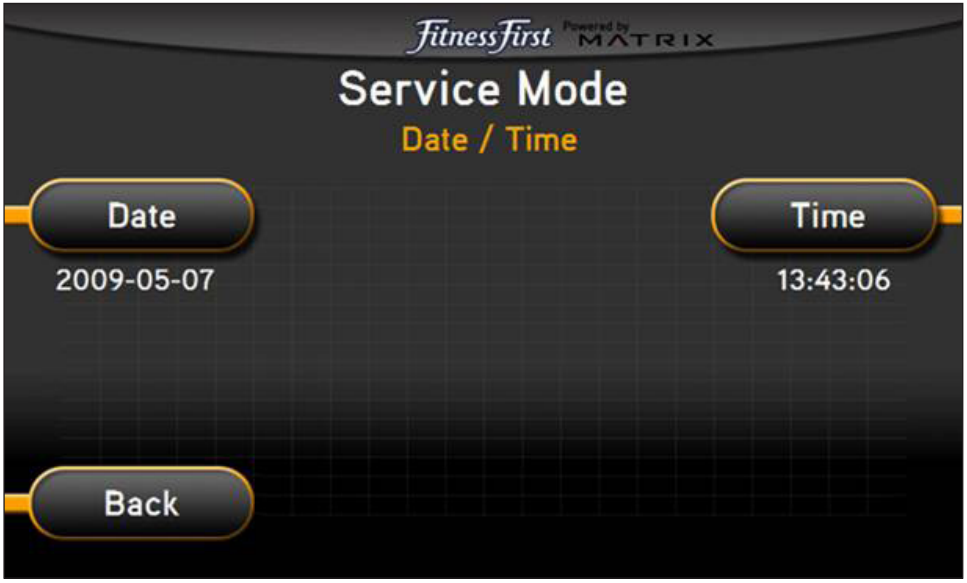
SERVICE MODE	FUNCTION & DEFAULTS	DESCRIPTIONS
Setup	Machine Type Default: Elliptical Trainer	This option selects the current model.
	Serial Number	This option displays the serial number of the console and frame.
	Accumulated Distance	This option displays the accumulated workout distance since production.
	Accumulated Time	This option displays the accumulated workout time since production.
	Show Boot	Factory Setting Only.

7.3 SERVICE MODE - TEST TAB



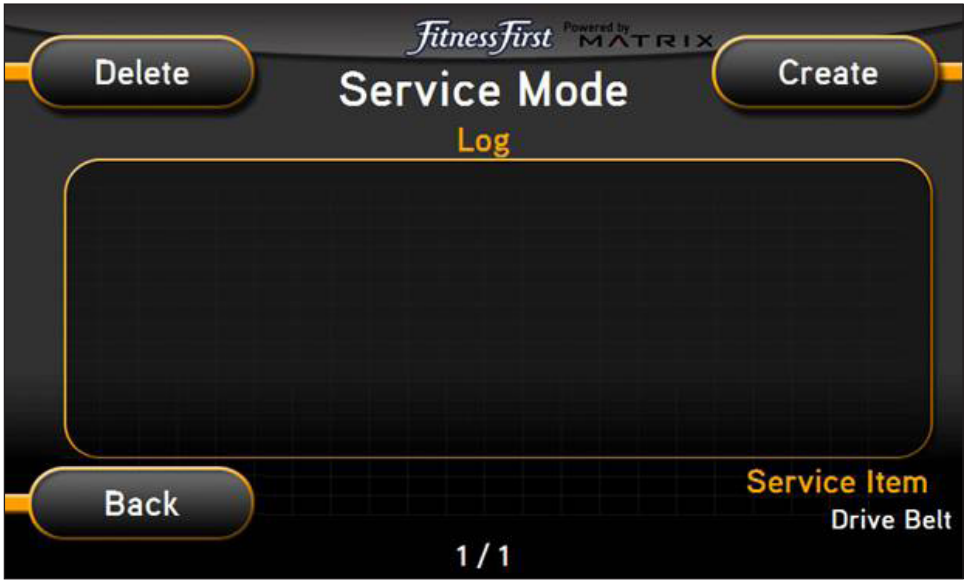
SERVICE MODE	FUNCTION & DEFAULTS	DESCRIPTIONS
Test	Keypad	This option is for a keypad test.

7.4 SERVICE MODE - DATE & TIME TAB



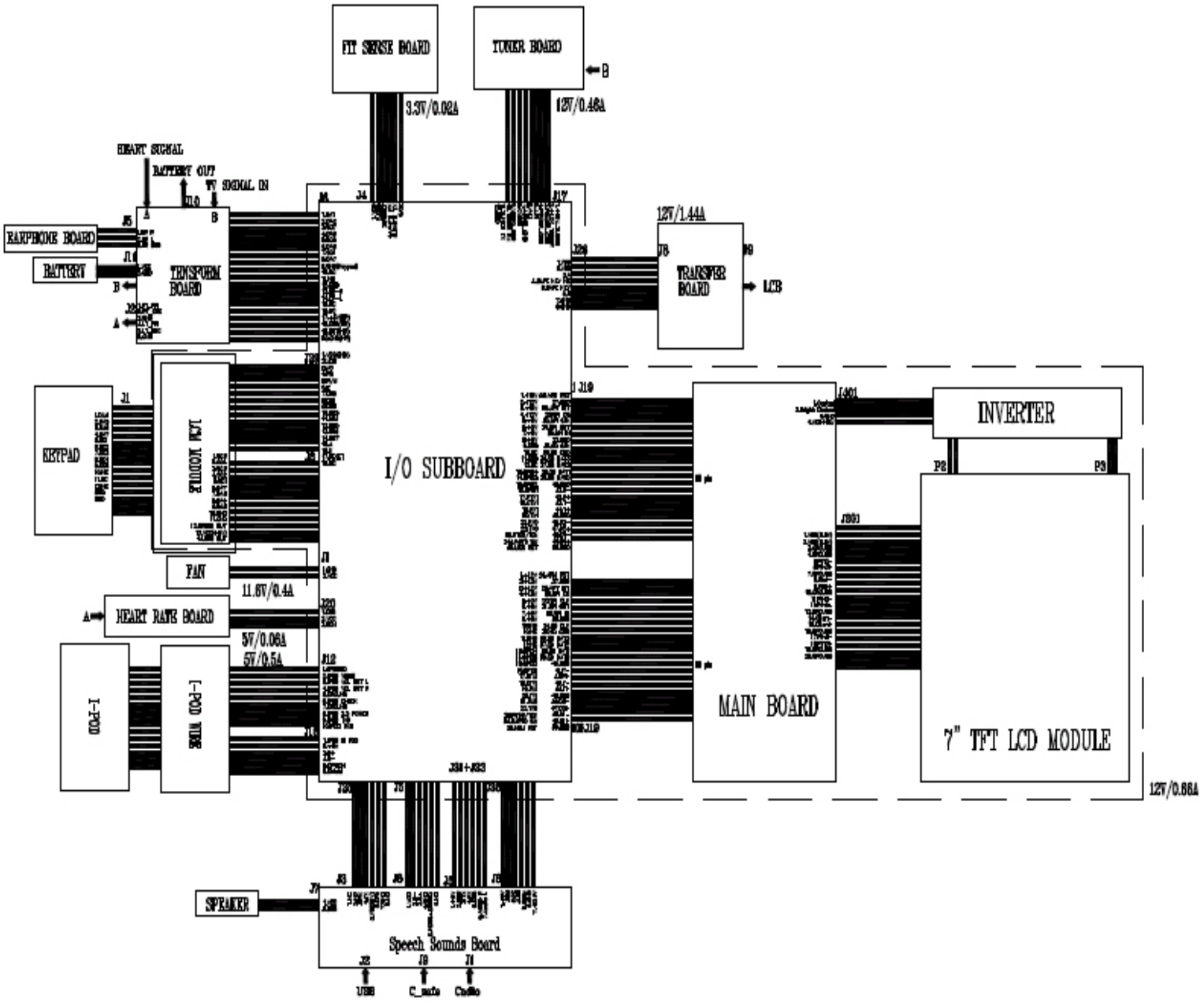
SERVICE MODE	FUNCTION & DEFAULTS	DESCRIPTIONS
Time	Date & Time	This option sets the current date and time on the machine.

7.5 SERVICE MODE - LOG TAB



SERVICE MODE	FUNCTION & DEFAULTS	DESCRIPTIONS
Log	Delete	This option deletes key components replacement history.
	Create	This option creates key components replacement history.

8.1 ELECTRICAL DIAGRAM



8.2 ERROR CODES ON THE CONSOLE

CODE	CLASS	DESCRIPTION	SOLUTION
0x02AB	C	Machine type error.	Set the correct machine type in Engineering Mode.
0x02B3	C	Resistance type error.	Set the correct machine type in Engineering Mode.
0x0201	A	Low voltage on the battery (voltage under 11.2V).	Charge by running or by plugging in the AC adapter.
0x0247	B	LCB failed (memory write error / feedback ADC error).	Replace the LCB.
0x0248	B	Battery failure or disconnection (Voltage under 8V or over 15V).	Check the wire connections at the battery. Replace the battery.
0x0441	B	When the UCB implements a command, the LCB is not receiving this command.	Check the machine type in Engineering Mode. Check the connections at the UCB and LCB.
0x04A0	C	Digital Communication Failure. LCB has no return message for the UCB for 3 seconds.	Check the console cable connections at the UCB and LCB. Replace the UCB or LCB as needed.
0x04B0	C	UCB No Response.	Check the console cable connections at the UCB and LCB. Replace the UCB or LCB as needed.

CLASS C ERRORS WILL DISPLAY ON THE CONSOLE.

CLASS A OR B ERRORS WILL ONLY DISPLAY IN SERVICE MODE 5.

8.3 LCB LED INSTRUCTIONS

LED INDICATOR	DESCRIPTION
LED 1	RPM (AC Plug In).
LED 2	+5V
LED 3	+15V
LED 4	Bus Voltage
LED 5	RPM (Generator).
LED 6	Status 1 (Program operation).
LED 7	Status 2 (Resistance value in middle 1/2 VCC).
LED 8	Status 3 (Digital Communication).
LED 9	+12V (Console Power).

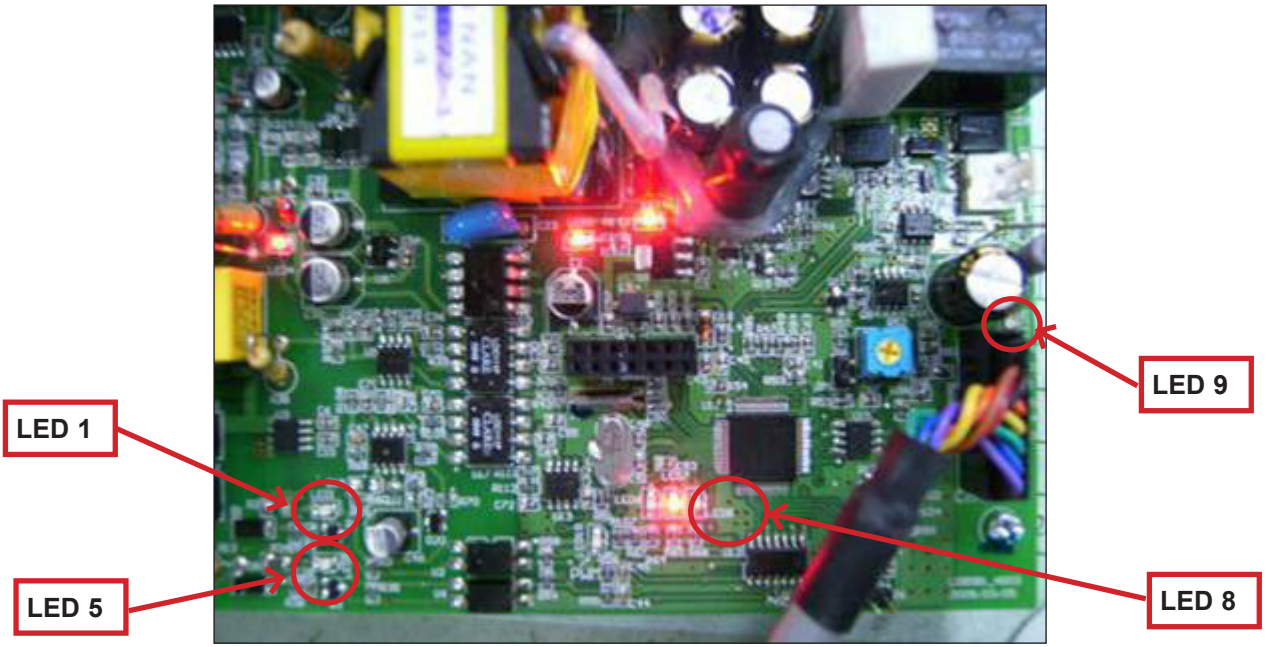
WITHOUT AC PLUG - NORMAL

LED 2 - LED 9 - On.
LED 1 - Off (No AC plug detected).
LED 5 - On (Generator power detected),

WITH AC PLUG - NORMAL

LED 2 - LED 9 - On.
LED 1 - On (AC plug detected).
LED 5 - Off (No Generator power detected).

NO DISPLAY ON THE CONSOLE OR THE DISPLAY IS DIM WHEN RUNNING



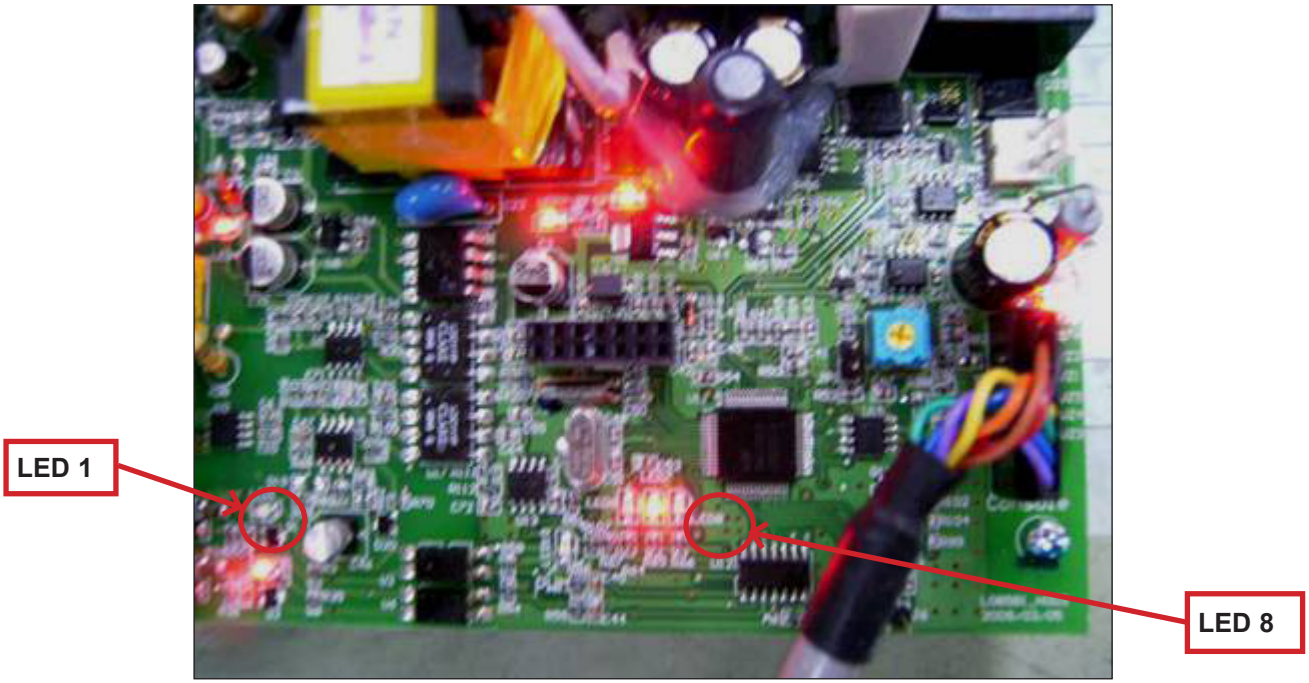
SYMPTOM: The console will not power up or the display is dim.

CHECK POINT	POSSIBLE ISSUE	SOLUTION
LEDs 2, 3, 4, 6, and 7 should be ON.	If they are OFF, the LCB is damaged.	Replace the LCB.
If LED 1 is OFF.	No AC power cord plugged in.	Normal for an unpowered unit.
If LED 5 is OFF.	Generator has no RPM output.	Normal for a powered unit. If unpowered and issue is still present, replace the generator.
If LED 8 is OFF.	Bad communication between UCB and LCB.	Reconnect the console cable at the LCB and UCB and check for kinks.
If LED 9 is OFF.	LCB is not providing 12V power to the UCB.	Replace the LCB.

SOLUTION IF LEDS ARE NORMAL:

1) If the LEDs are lit normally, replace the UCB and console cable.
2) if the issue is still present after the UCB and console cable are replaced, replace the LCB.

ERROR 0x04A0 (DIGITAL COMMUNICATION FAILURE)



SYMPTOM: Error code 0x04A0 is displayed on the console.

CHECK POINT	POSSIBLE ISSUE	SOLUTION
LEDs 2, 3, 4, 6, and 7 should be ON.	If they are OFF, the LCB is damaged.	Replace the LCB.
If LED1 is OFF.	No AC power cord plugged in.	Normal for an unpowered unit.
If LED 8 is OFF.	Bad communication between UCB and LCB.	Reconnect the console cable at the LCB and UCB and check for kinks.

SOLUTION IF LEDS ARE NORMAL:

1) If the LEDs are lit normally, replace the UCB and console cable.
2) if the issue is still present after the UCB and console cable are replaced, replace the LCB.

8.6 TROUBLESHOOTING - KEYPAD ISSUES

ALL OR SOME OF THE FUNCTION KEYS DO NOT RESPOND

POSSIBLE CAUSES:

1) The keypad connection ribbon cable has not been plugged in correctly.
2) The keypad is damaged.
3) The UCB is damaged.

SOLUTION:

1) Perform a keypad test in Service Mode:
   a. Press ENTER, 3, 0, 0, 1, ENTER on the upper display and Service Mode will appear on the display.
   b. Press the key next to TEST on the display.
   c. Press the key next to KEYPAD on the display.
   c. Test the affected keypad. If the keypad works in the keypad test it may not be a functioning key in the program used for testing it.

2) Check the connections of the keypad at the UCB.
   a. Remove the console from the console mast.
   b. Remove the 6 screws holding the back of the console to the front (Figure A).
   c. Inspect the keypad ribbon cable connection at the UCB (Figure B).
   d. Even if the keypad ribbon cable appears to be connected correctly, unplug and reseat the cable, then retest.

3) Replace the affected keypad.

4) Replace the UCB.

FIGURE A

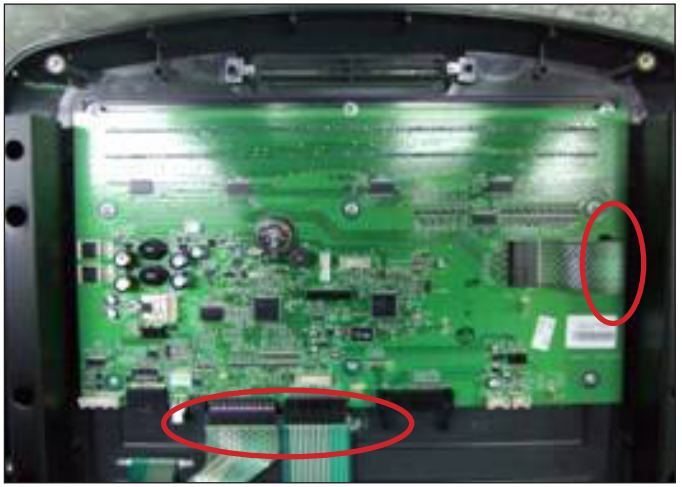


FIGURE B

8.7 TROUBLESHOOTING - ENTERTAINMENT KEYPAD ISSUES

PROBLEM:

The entertainment keypad is not recognizing the correct keys.

SOLUTION:

1) Perform a keypad test. To do so:
   a. Press ENTER, 3, 0, 0, 1, ENTER on the upper keypad to enter Service Mode.
   b. Press the key next to TEST on the display.
   c. Press the key next to KEYPAD on the display.
   d. The entertainment keypad can now be tested. Press various keys to see if the console is recognizing the correct keys (Figure A). If not, proceed to Step 2.

2) There are 2 different entertainment keypads available for the E7x Elliptical Trainer. To change which key sequence is utilized:
   a. Press ENTER, 3, 0, 6, 0, ENTER on the upper keypad.
   b. The console should chime twice.
   c. Re-test the entertainment keypad, it should now recognize the correct keys.

HIGH OR NO RESISTANCE

POSSIBLE CAUSES:

1) The console cable is damaged or not properly plugged in.
2) The UCB is damaged.
3) The Generator is damaged.
4) The LCB is damaged.

SOLUTION:

1) Check the console cable connections at the UCB and LCB.

2) Check if the generator is outputting variable power:
   a. Insert the probes from a multi-meter into the black and red wires on the generator wire harness connector (Figure A).
   b. When pedaling, the output voltage from the generator should vary depending on the RPM. The generator should output 120 VAC at 94 RPM.

3) If the generator does not have variable power, replace the generator.

4) If the generator does have variable power, replace the LCB.

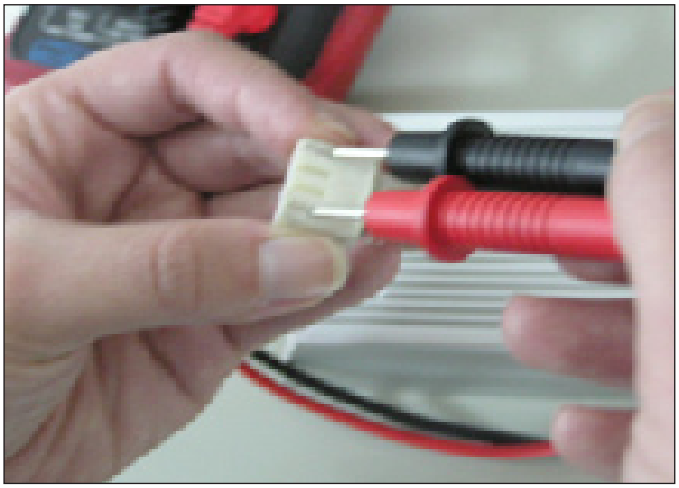


FIGURE A

PEDALS SLIPPING

POSSIBLE CAUSES:

1) The belt tension is not enough.
2) The one way bearing is damaged.

SOLUTION:

1) Remove the covers and check the belt tension.
   a. The drive belt should be tightened to 170 ft / lbs. .
   b. The ECB belt should be tightened to 85 ft / lbs.

2) If the belts are tensioned correctly, the one way bearing is damaged, replace the drive assembly.

KNOCKING OR CREAKING NOISE

POSSIBLE CAUSES:

1) The pedal is on the pedal arm too loosely.
2) The drive axle is worn out.
3) The belt tension is not enough, or the belts are too dirty.

SOLUTION:

1) Retighten the pedal on the pedal arm.

2) Replace the drive axle as needed.

3) Remove the covers and check the belt tension.
   a. The drive belt should be tightened to 170 ft / lbs.
   b. The ECB belt should be tightened to 85 ft / lbs.

4) Clean the belts. If they are worn or will not clean, replace the belts.

8.11 TROUBLESHOOTING HEART RATE ISSUES

HEART RATE FUNCTION DOES NOT WORK OR IS READING INCORRECTLY

POSSIBLE CAUSES:

1) The chest strap being used is not making good contact with the user's chest.
2) The chest strap is at a low battery status.
3) The chest strap is damaged.
4) The HR grips are damaged.
5) The HR board is damaged.
6) The UCB is damaged.

SOLUTION:

1) Recenter the chest strap below the user's pectoral muscle (Figure A) and check again.

2) Replace the battery in the chest strap.

3) Replace the chest strap.

4) If there is no HR present, replace the HR grips.

5) If there is a HR present but it is much higher than normal, replace the HR board.

6) If replacing the HR grips and board does not resolve the issues, replace the console.

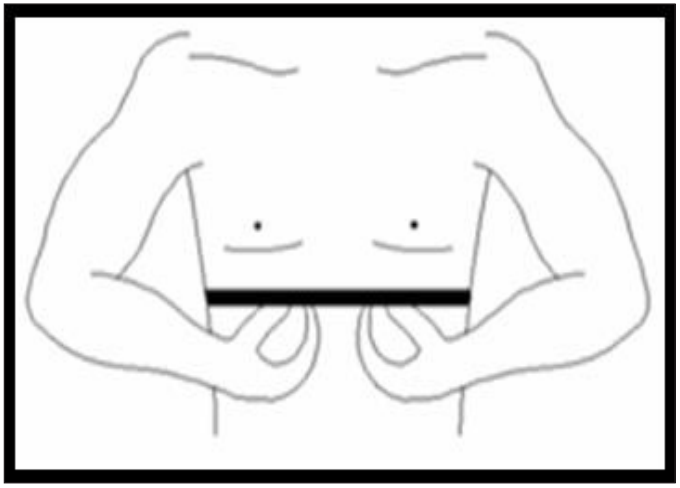


FIGURE A

8.12 TROUBLESHOOTING - TV ISSUES

1) This section will help with diagnosing problems with the integrated screen TV for the Matrix E7x-01 Elliptical Trainer.

2) The TV should have power whenever the unit is powered up. If the TV will not power up when the power button is pressed:
a) Press ENTER, 3, 0, 0, 1, ENTER on the lower number keypad. Press the key next to TEST. Check to make sure that it says INCLUDE POWER next to the TV Keypad option. If it is excluded, change to include power and retry the TV power.
b) If the TV Keypad option is correct and the TV still will not power up, replace the console.

3) For a fuzzy or unclear picture, see the TV programming instructions in Section 10.5. If the TV is still fuzzy or unclear after programming:
a) Check the coax connection at the entertainment port (Figure A).
b) Remove the 4 screws holding the console to the console mast and check the coax connection at the console (Figure B).
c) Move the coax cable to directly plug into the back of the console bypassing the entertainment port. If this resolves the issue, replace the internal coax cable.
d) If plugging the coax cable into the back of the console does not resolve the issue, check the coax cable with a known working television. If the coax cable is good, replace the console.

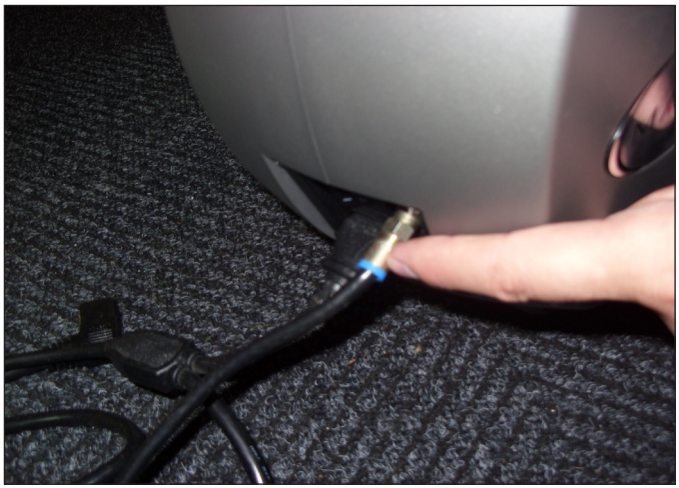


FIGURE A

FIGURE B

CHAPTER 9: PART REPLACEMENT GUIDE

9.1 FRONT DISK REPLACEMENT

1) Remove the crank arm plastic cap at the front disk (Figure A).
2) Detach the crank from the crank arm (Figures B & C).
3) Locate the center cap in the center of the front disk (Figure D).

FIGURE A

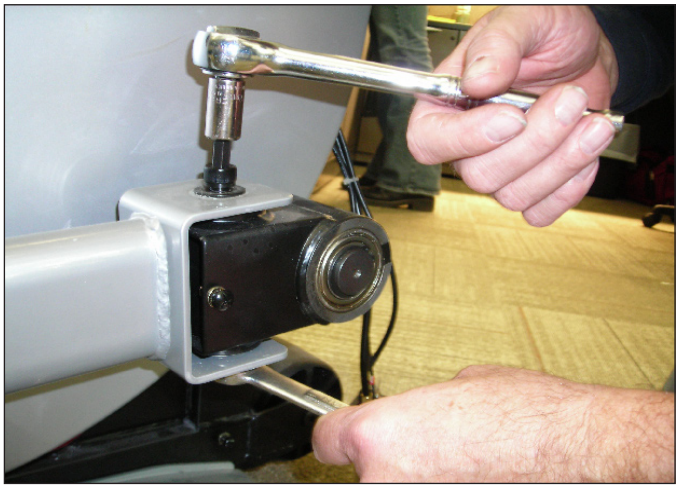


FIGURE B

FIGURE C

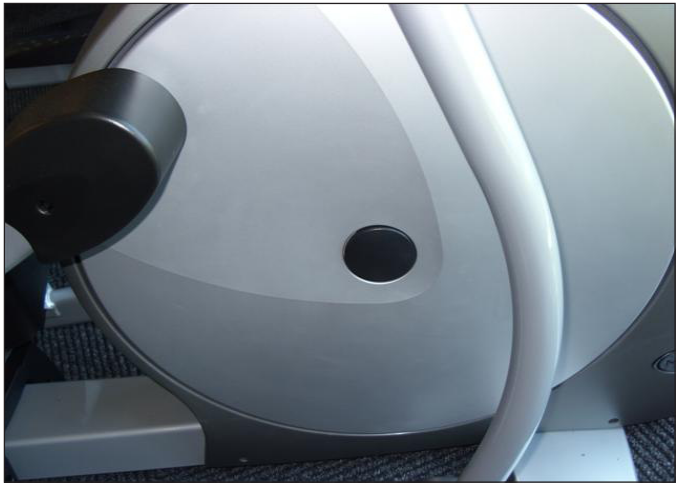


FIGURE D

9.1 FRONT DISK REPLACEMENT – CONTINUED

4) Turn the center cap counter clockwise with the palm of your hand and remove the cap and spring (Figure E).
5) Remove the 24mm locking nut and washer by turning them counter clockwise (Figure F).

FIGURE E

FIGURE F

7) Thread the Matrix disk removal tool into the center hub (Figure G).
8) Turn the center bolt of the removal tool clockwise until the main disk can be removed (Figures H and I). Repeat if necessary for the opposite side disk.

FIGURE G

FIGURE H

FIGURE I

9) Reverse Steps 1-8 to re-install the disk. ***NOTE:*** When reinstalling the 24mm nut, it should be tightened to 196 N-m Torque.

9.2 FRONT SHROUD REPLACEMENT

1) Remove the front disks as outlined in Section 8.1.
2) Remove the screws that hold the front shrouds in place and to each other on each side (Figure A). ***NOTE:*** You will need to lift the console mast boot to remove some of the screws.

FIGURE A

3) Remove the front shrouds for frame access (Figure B).

FIGURE B

4) Reverse Steps 1-3 to install a new shroud.

9.3 LOWER CONTROL BOARD REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the right side front disk from the machine as outlined in Section 8.1.
3) Remove the right side front shroud as outlined in Section 8.2.
4) Disconnect all wires from the LCB (Figure A).

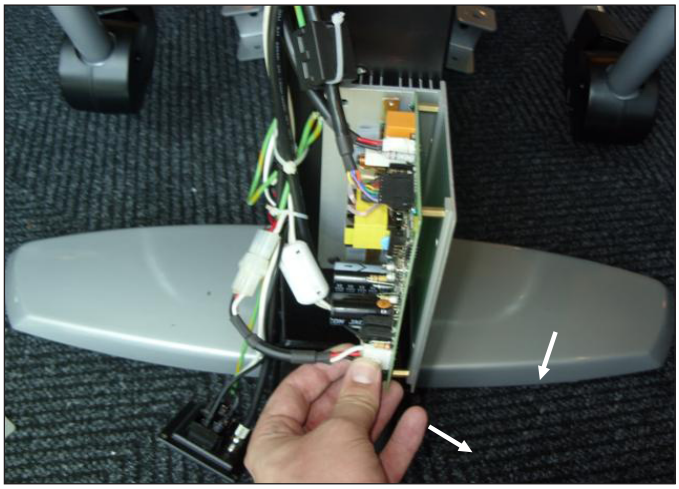


FIGURE A

5) Remove the 2 screws holding the LCB to the frame and remove the LCB. (Figure B).

FIGURE B

6) Reverse Steps 1-5 to install a new LCB.
7) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.4 ECB (ELECTRONIC BRAKE) REPLACEMENT

1) Turn off power and disconnect the cord from the machine.
2) Remove the front disks as outlined in Section 8.1.
3) Remove the front shrouds as outlined in Section 8.2.
4) Unplug the ECB wire harness from the lower control board (Figure A).
5) Remove the screw holding the ECB axle in place on the right side of the frame (Figure B).
6) Loosen the large nut on the tension eye bolt on both sides of the frame (Figure C).

FIGURE A

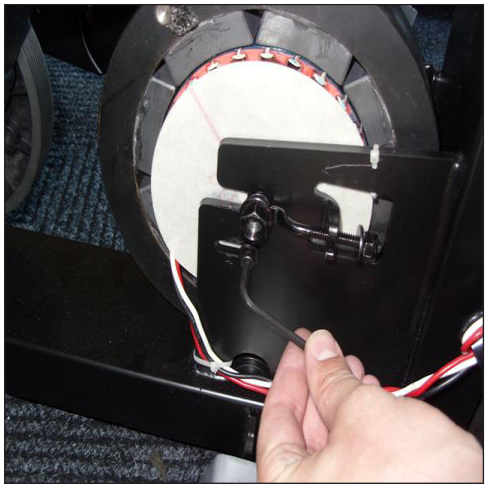


FIGURE B

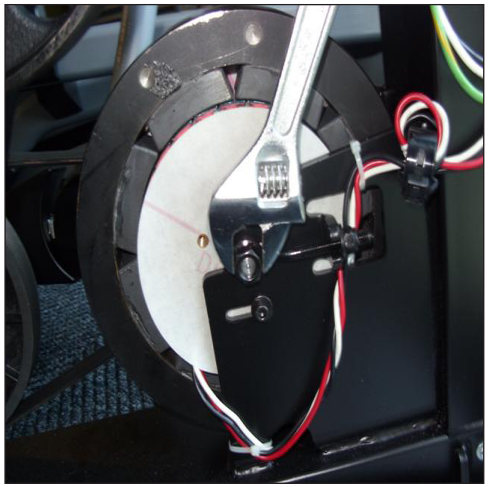


FIGURE C

7) Remove the tension eye bot nut from the ECB bracket on both sides of the frame (Figure D).
8) Once the tension eye bolts have been removed, slide the ECB towards the back of the unit and off of the ECB bracket (Figure E).

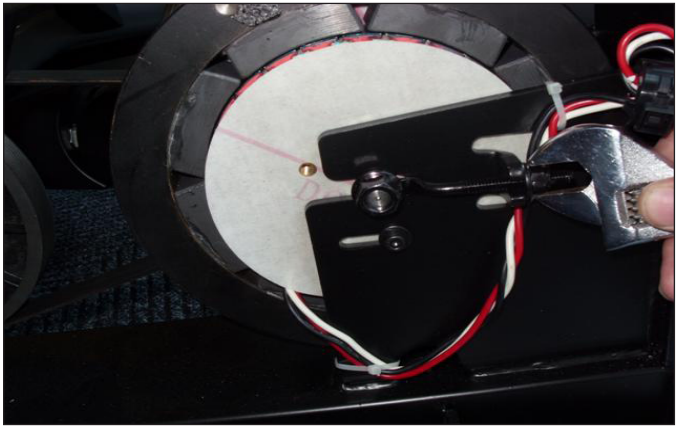


FIGURE D

FIGURE E

9) Reverse Steps 1-8 to install a new ECB. ***NOTE:*** Be sure to re-tension the ECB belt to 85 ft / lbs using the tension eye bolts.
10) Test the Elliptical Trainer for function as outlined in Section 8.21. .

9.5 ECB BELT REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the left side front disk from the machine as outlined in Section 8.1.
3) Remove the left side shroud from the machine as oultined in Section 8.2.
4) Remove the screw holding the ECB axle in place on the right side of the frame (Figure A).
5) Loosen the large nut on the tension eye bolt on both sides of the frame (Figure B).
6) Remove the tension eye bot nut from the ECB bracket on both sides of the frame (Figure C).

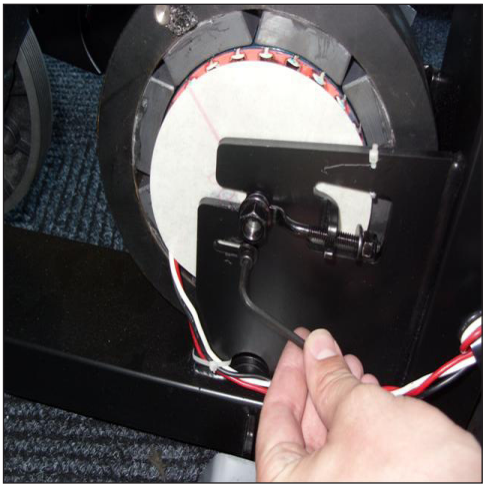


FIGURE A

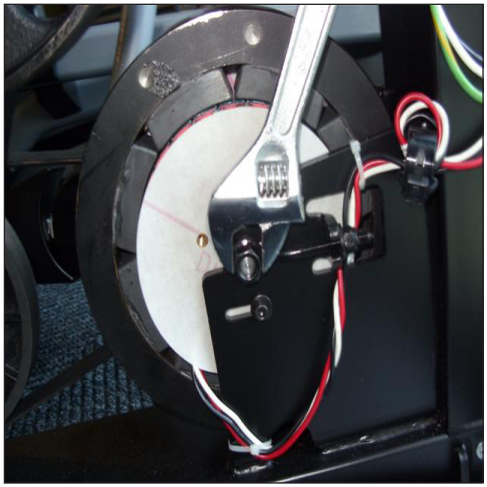


FIGURE B

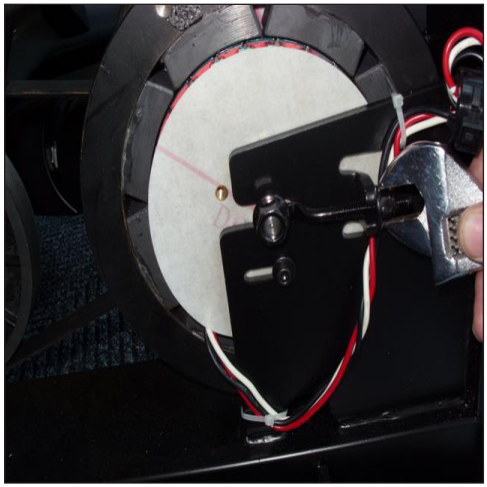


FIGURE C

7) Once the tension eye bolts have been removed, slide the ECB towards the back of the unit and off of the ECB bracket (Figure D), this will allow you to remove the ECB belt from the ECB and pulley axle set (Figure E).

FIGURE D

FIGURE E

8) Reverse Steps 1-7 to install a new ECB belt. ***NOTE:*** Be sure to tighten the new ECB belt to 85 ft / lbs using the ECB eye bolts.
8) Test the Elliptical Trainer for function as outlined in Section 8.21. .

9.6 DRIVE BELT REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove the right side front disk from the machine as outlined in Section 8.1.
3) Loosen the belt tension screw on the left side of the tension pulley and rotate the pulley counter clockwise until there is enough slack in the belt to remove it (Figures A & B).

FIGURE A

FIGURE B

4) Walk the new drive belt into position on the drive assembly.
5) Once the drive belt is in place, reapply tension by rotating the tension pulley clockwise until there is 170 ft / lbs of tension on the belt. Tighten the belt tension screw to hold the tension pulley in place (Figure C).

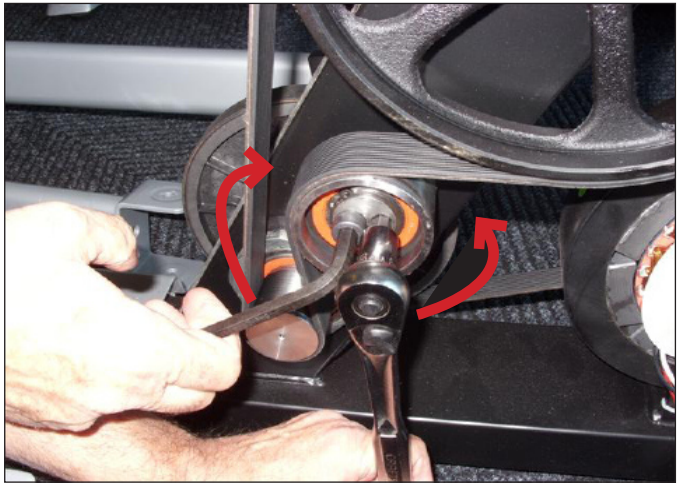


FIGURE C

6) Reinstall the front shroud and disk.
7) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.7 PULLEY AXLE SET REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove both front disks from the machine as outlined in Section 9.1.
3) Remove both front shrouds from the machine as outlined in Section 9.2.
4) Remove the ECB belt as outlined in Section 9.5.
5) Remove the drive belt as outlined in Section 9.6.
6) Remove the 75 mm nut holding the pulley axle in place using the large socket available from Matrix (Figure A).
7) Use a hammer or mallet to remove the pulley axle from the left side (Figure B) and clean any debris from the frame (Figure C).
8) Reverse Steps 1-7 to install a new pulley axle set, making sure to tighten the 75mm nut to 100 N-m torque. Re-tension the belts as outlined in Sections 9.5 and 9.6.
8) Test the Elliptical Trainer for function as outlined in Section 9.21.

FIGURE A

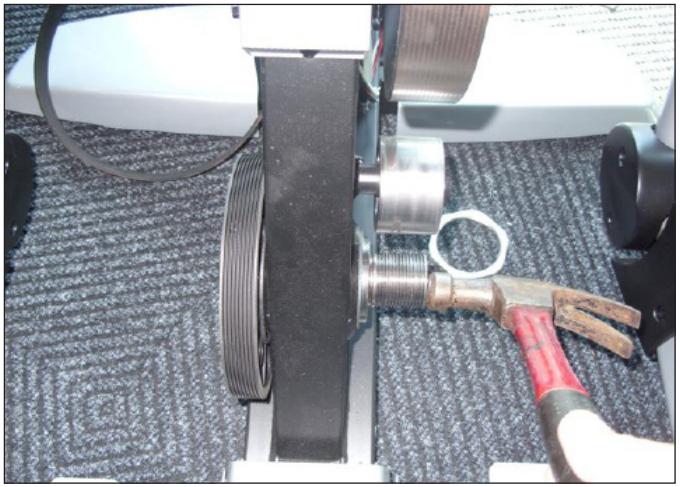


FIGURE B

FIGURE C

9.8 DRIVE AXLE SET REPLACEMENT

1) Turn off the power and disconnect the cord from the machine.
2) Remove both front disks from the machine as outlined in Section 9.1.
3) Remove both front shrouds from the machine as outlined in Section 9.2.
4) Remove the ECB belt as outlined in Section 9.5.
5) Remove the drive belt as outlined in Section 9.6.
6) Release any bent tabs on the lock washer around the 75 mm nut holding the drive axle set to the frame (Figure A).
7) Remove the 75 mm nut holding the drive axle set to the frame using the large socket available from Matrix (Figure B).
8) Remove the drive axle set from the right side and clean any debris from the frame (Figure C).
9) Reverse steps 1-8 to install a new drive axle set, making sure to tighten the 75mm nut to 100 N-m torque and rebend the lock washer tabs to secure the nut. Be sure to re-tension the belts as outlined in Sections 9.5 and 9.6.
10) Test the Elliptical Trainer for function as outlined in Section 9.21.

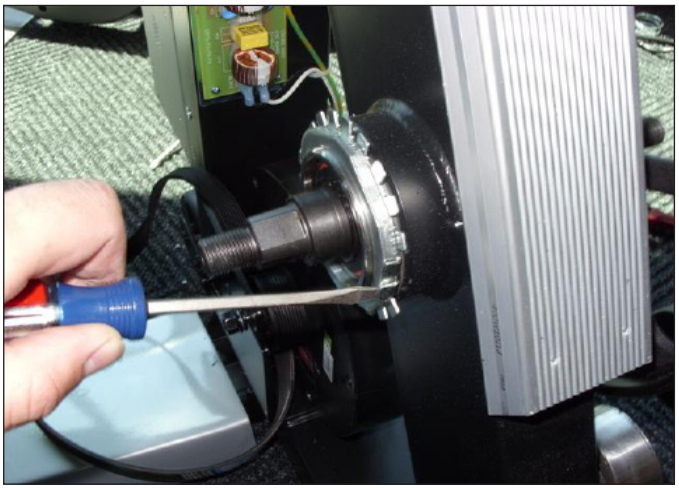


FIGURE A

FIGURE B

FIGURE C

9.9 CONSOLE REPLACEMENT

1) Remove the 4 screws that hold the console to the top of the console mast (Figure A).

FIGURE A

2) Disconnect the data cable, heart rate, and ground wires and remove the console (Figure B).

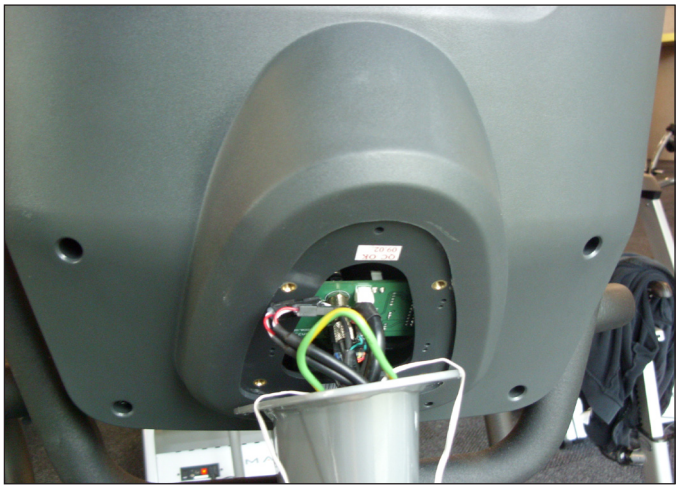


FIGURE B

3) Reconnect the wire connections to the new console.
4) Carefully push the wires into the console and mast until they are clear of the console / mast connection and attach the console to the mast using the 4 screws removed in Step 2.
5) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.10 CONSOLE OVERLAYS & KEYPADS REPLACEMENT

1) Remove the console as outlined in Section 8.9.
2) Remove the back cover of the console (Figure A).
3) Unplug and remove the faulty overlay (Figure B).

FIGURE A

FIGURE B

4) Clean the console area with alcohol to remove any left over adhesive (Figure C).
5) Remove the protective film over the display window of the overlay (Figure D).

FIGURE C

FIGURE D

9.10 CONSOLE KEYPAD / OVERLAY REPLACEMENT - CONTINUED

6) Peel part of the protective film from the back of the overlay (Figure E).
7) Push the overlay ribbon cable through the hole in the console and plug it in (Figure F).

FIGURE E

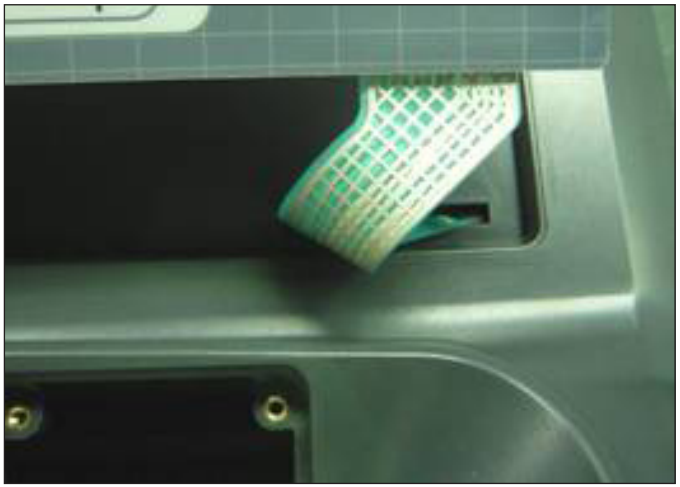


FIGURE F

8) Match the overlay to the cutout on the console (Figure G).

FIGURE G

9.10 CONSOLE KEYPAD & OVERLAY REPLACEMENT - CONTINUED

9) Press down on the corners of the overlay to keep it in place, then remove the protective film (Figure H & I).

FIGURE H

FIGURE I

10) Once the overlay is in the correct position, press down on the overlay with a cloth to adhere it to the console plastic (Figure J).

FIGURE J

11) Use the same procedure to replace any additional faulty overlays. ***NOTE:*** Overlays can not be reused.
12) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.11 HANDLEBAR ASSEMBLY REPLACEMENT

1) Remove the two screws holding the plastic handlebar cover in place and remove the cover (Figures A & B).

FIGURE A

FIGURE B

2) Remove the 4 bolts that hold the handlebar to the console mast being careful to support the handlebar (Figures C and D).

FIGURE C

FIGURE D

3) Carefully remove the wires from inside the console mast until the connectors on the ends come free and disconnect.
4) To install a new handlebar assembly, connect the new handlebar and carefully push the heart rate wires into the console mast.
5) Attach the new handlebar assembly to the console mast using the 4 screws removed in Step 3.
6) Reattach the cover over the handlebar assembly.
7) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.12 HEART RATE GRIPS REPLACEMENT

1) Using a flat screwdriver, pry the silver metal heart rate plate on the back side of the HR grip away from the plastic of the HR grip (Figure A).
2) Disconnect the HR grip wire and remove the metal plate (Figure B).

FIGURE A

FIGURE B

3) Remove the 3 screws holding the HR grip together (Figure C). ***NOTE:*** You may need to remove the console to give access to the HR grip screws.
4) Disconnect the level button and remove the two halves of the HR grip (Figure D).

FIGURE C

FIGURE D

5) Reverse Steps 1-4 to install new HR grips.
6) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.13 CUP HOLDER REPLACEMENT

1) Remove the 2 screws holding the cup holder onto the console mast (Figure A).

FIGURE A

2) Remove the cup holder (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new cup holder.

9.14 DUAL ACTION HANDLEBAR REPLACEMENT

1) Remove the plastic cover where the dual action handlebar meets the pedal arm (Figure A).
2) Remove the bolt and bushings where the dual action handlebar and the pedal arm meet (Figure B).

FIGURE A

FIGURE B

3) Remove the two bolts holding the dual action handlebar to the console mast pivot (Figure C).
4) Remove the pivot cap and handlebar (Figure D).

FIGURE C

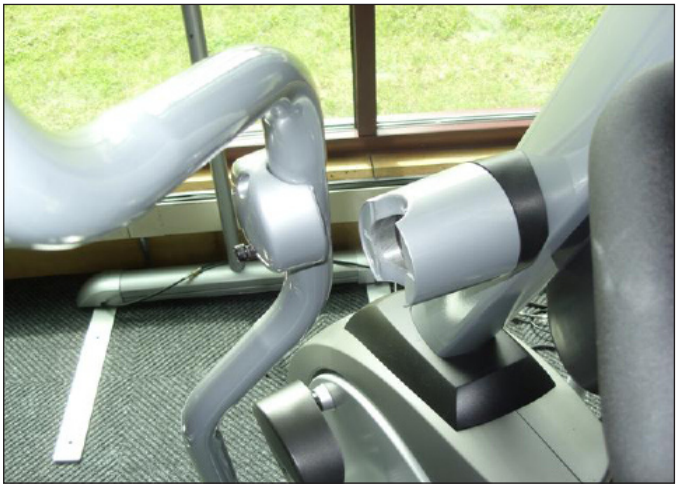


FIGURE D

5) Reverse steps 1-4 to install a new dual action handlebar.
6) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.15 CONSOLE MAST REPLACEMENT

1) Remove the console as oultined in Section 8.9.
2) Remove the 2 screws on each side holding the dual action handlebars to the console mast pivot (Figures A & B).

FIGURE A

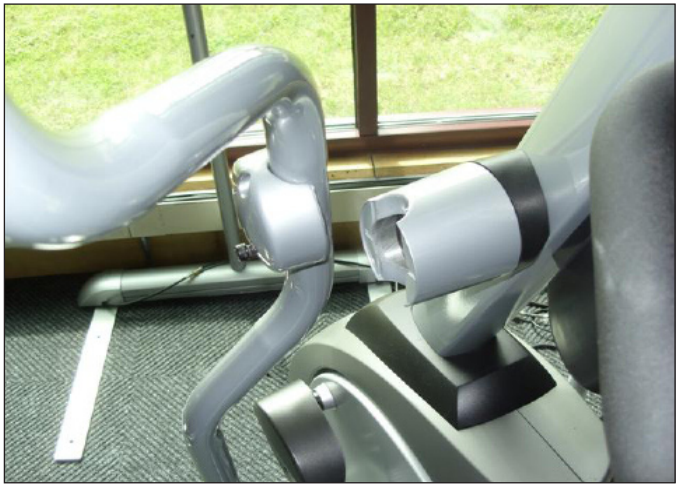


FIGURE B

3) Lift up the rubber boot at the bottom of the console mast (Figure C).
4) Remove the 4 screws holding the console mast onto the frame (Figure D).

FIGURE C

FIGURE D

5) Remove the console mast being careful to pull the console wires out of the bottom of the mast without damaging them.
6) Reverse Steps 1-5 to install a new console mast. ***NOTE:*** Be sure to pull the console wires up through the mast before installing the 4 screws removed in Step 4.
7) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.16 FOOT PEDALS REPLACEMENT

1) Pull up on the rubber pad on top of the plastic pedal to expose the pedal screws (Figure A).
2) Remove the 4 Phillips screws that hold the plastic foot pedal to the foot plate (Figure B).

FIGURE A

FIGURE B

3) Remove the plastic foot pedal (Figure C).

FIGURE C

4) Reverse Steps 1-3 to install a new foot pedal.
5) Test the Elliptical Trainer as outlined in Section 8.21.

9.17 PEDAL ARM REPLACEMENT

1) Remove the plastic cover where the dual action handlebar meets the pedal arm (Figure A).
2) Remove the bolt and bushings where the dual action handlebar and the pedal arm meet (Figure B). ***NOTE:*** Be sure to move the bushings from the old pedal arm to the new one (Figure C).

FIGURE A

FIGURE B

FIGURE C

9.17 PEDAL ARM REPLACEMENT - CONTINUED

3) Remove the pedal as outlined in Section 8.16.
4) Remove the 3 bolts that hold on the mounting plate at the crank arm / pedal arm joint (Figure D). Note the plastic washer that mounts at the end of the shaft (Figure E).

FIGURE D

FIGURE E

5) Slide the pedal arm shaft out of the crank arm housing (Figure F) noting the order of the washers on the pedal arm shaft (Figure G).

FIGURE F

FIGURE G

6) Reverse Steps 1-5 to install a new pedal arm.
7) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.18 CRANK ARM REPLACEMENT

1) Remove the crank arm plastic cap at the front disk (Figure A).
2) Disconnect the crank arm from the crank assembly (Figure B).

FIGURE A

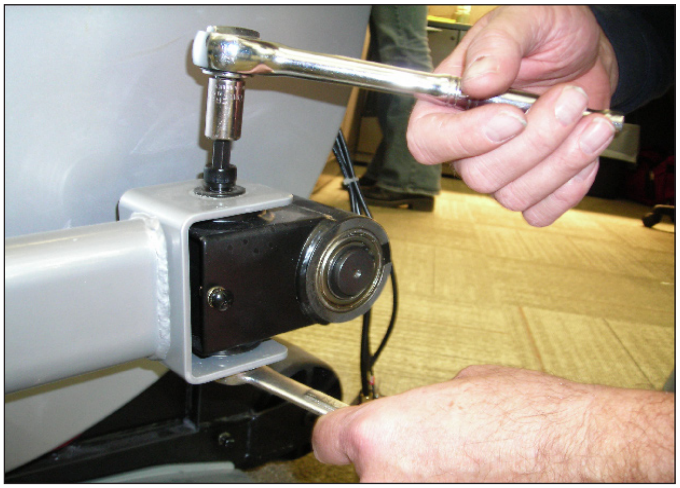


FIGURE B

3) Remove the 3 bolts that hold on the mounting plate at the crank arm / pedal arm joint (Figure C). Note the plastic washer that mounts at the end of the shaft (Figure D).

FIGURE C

FIGURE D

9.18 CRANK ARM REPLACEMENT - CONTINUED

4) Slide the pedal arm shaft out of the crank arm housing (Figure E) noting the order of the washers on the pedal arm shaft (Figure F).

FIGURE E

FIGURE F

5) Remove the 2 screws on each side holding on the rear end cap and remove it (Figure G & H).

FIGURE G

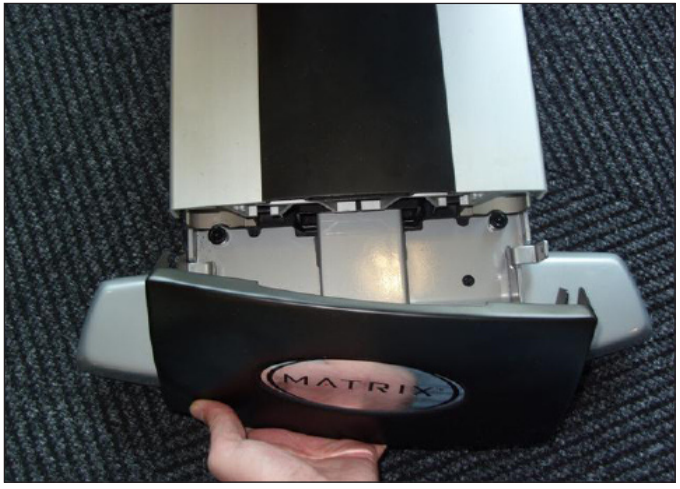


FIGURE H

9.18 CRANK ARM REPLACEMENT - CONTINUED

6) Remove the middle plastic cover from between the pedals by pulling it towards the rear of the unit (Figure I).

FIGURE I

7) Remove the 3 screws holding the top roller track in place (Figure J).

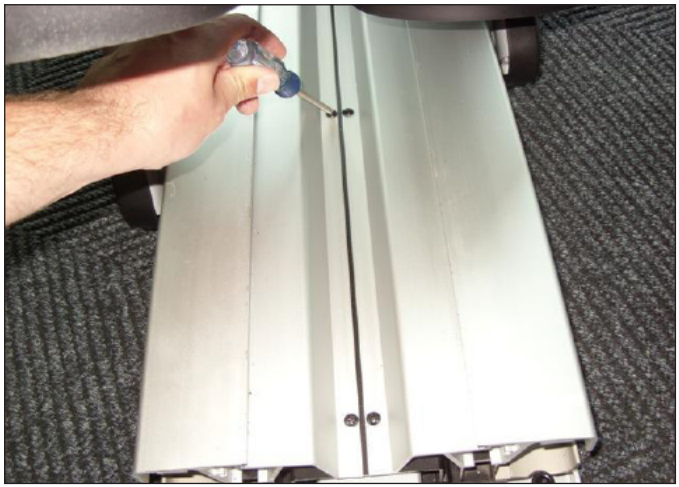


FIGURE J

8) Once the top track is removed, the crank arm can be removed from the unit.
9) Reverse Steps 1-8 to install a new crank arm.
10) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.19 ROLLER REPLACEMENT

1) Remove the 3 bolts that hold on the mounting plate at the crank arm / pedal arm joint (Figure A). Note the plastic washer that mounts at the end of the shaft (Figure B).

FIGURE A

FIGURE B

2) Slide the pedal arm shaft out of the crank arm housing (Figure C) noting the order of the washers on the pedal arm shaft (Figure D).

FIGURE C

FIGURE D

9.19 ROLLER REPLACEMENT - CONTINUED

3) Remove the 2 screws on each side holding on the rear end cap and remove it (Figure E & F).

FIGURE E

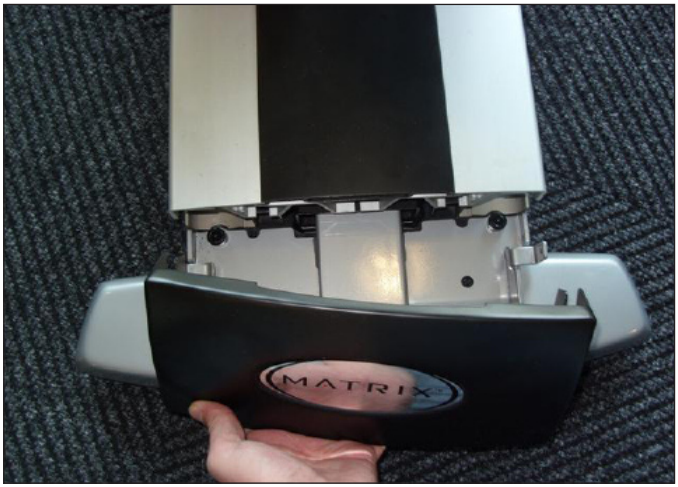


FIGURE F

4) Remove the middle plastic cover from between the pedals by pulling it towards the rear of the unit (Figure G).

FIGURE G

9.19 ROLLER REPLACEMENT - CONTINUED

5) Remove the 3 screws holding the top roller track in place (Figure H).
6) Remove the screw holding the roller to the crank arm (Figure I).

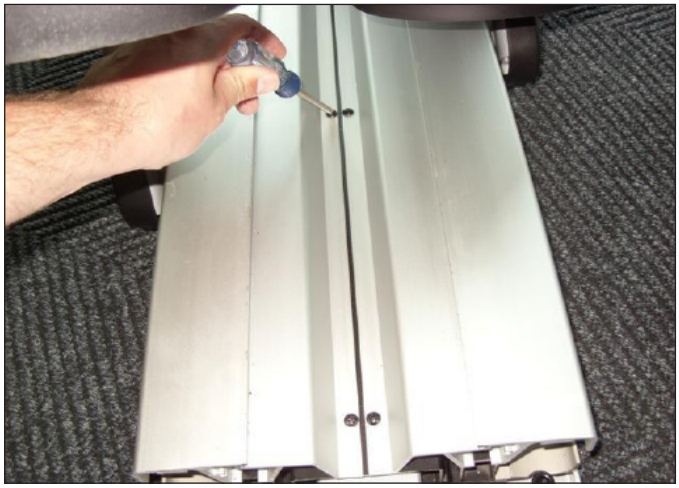


FIGURE H

7) Remove the roller from the crank arm using the roller puller available from Matrix (Figure J).

FIGURE I

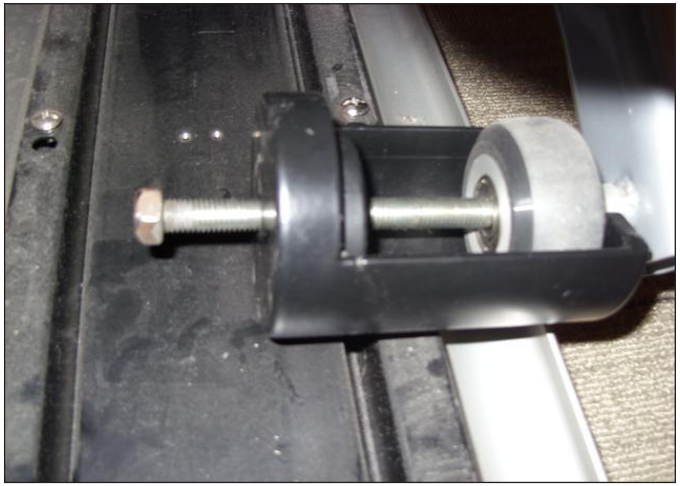


FIGURE J

8) Reverse Steps 1-7 to install a new roller.
9) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.20 ROLLER TRACK REPLACEMENT

1) Remove the 3 bolts that hold on the mounting plate at the crank arm / pedal arm joint (Figure A). Note the plastic washer that mounts at the end of the shaft (Figure B).

FIGURE A

FIGURE B

2) Slide the pedal arm shaft out of the crank arm housing (Figure C) noting the order of the washers on the pedal arm shaft (Figure D).

FIGURE C

FIGURE D

9.20 ROLLER TRACK REPLACEMENT - CONTINUED

3) Remove the 2 screws on each side holding on the rear end cap and remove it (Figure E & F).

FIGURE E

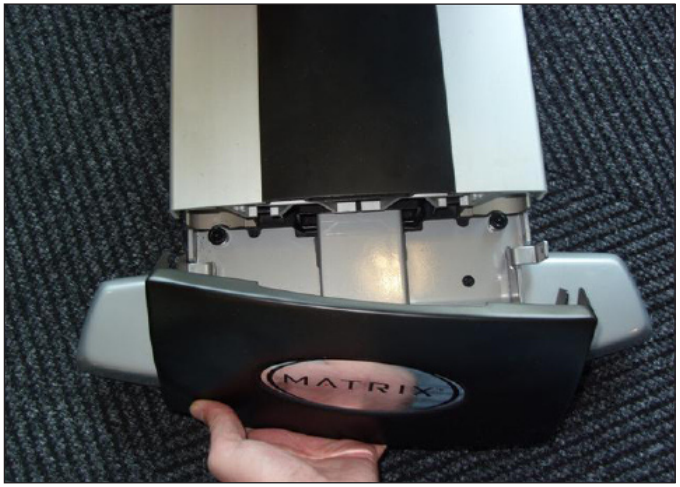


FIGURE F

4) Remove the middle plastic cover from between the pedals by pulling it towards the rear of the unit (Figure G).

FIGURE G

9.20 ROLLER TRACK REPLACEMENT - CONTINUED

5) Remove the 3 screws holding the top roller track in place (Figure H).

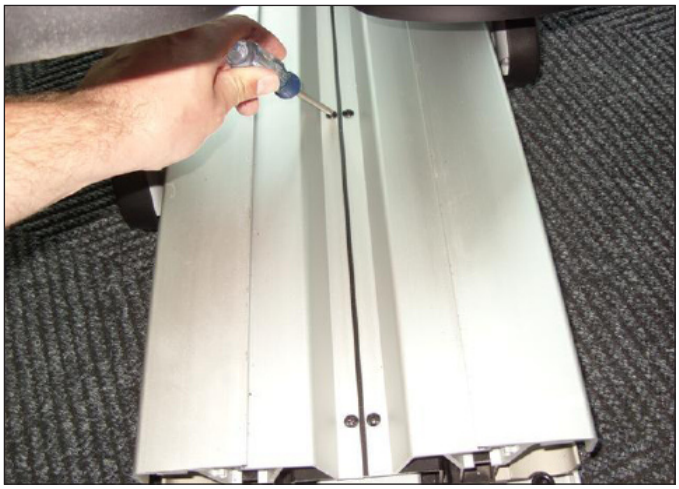


FIGURE H

6) Move the crank arm to the side off of the roller track.
7) Remove the 3 screws holding the bottom roller track to the frame (Figure I) and remove the roller track (Figure J).

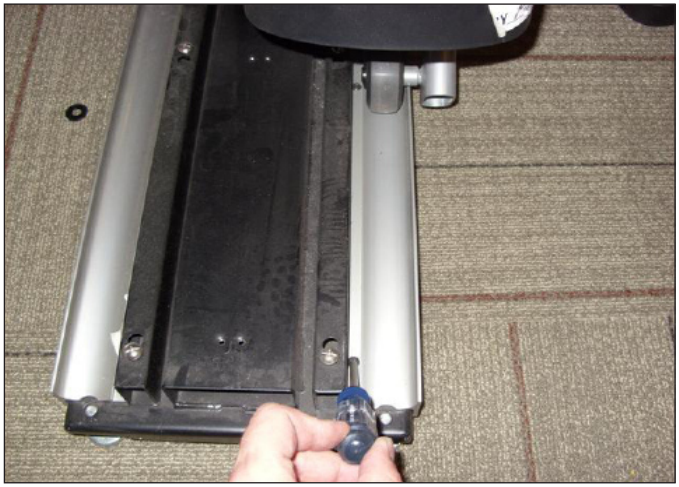


FIGURE I

FIGURE J

8) Reverse Steps 1-7 to install a new roller.
9) Test the Elliptical Trainer for function as outlined in Section 8.21.

9.21 TESTING THE ELLIPTICAL TRAINER

ONCE THE UNIT OR REPLACEMENT PART IS FULLY INSTALLED AND ASSEMBLED AND PROPERLY PLACED ON THE FLOOR, USE THE FOLLOWING INSTRUCTIONS TO SETUP AND TEST THE MACHINE:

1) Check that the console is set for elliptical.
   a. Press ENTER, 3, 0, 0, 1, ENTER on the upper keypad to enter Service Mode.
   b. Press the key next to SETUP on the display.
   c. Press the key next to MACHINE TYPE on the display.
   d. Press the key next to ELLIPTICAL on the display.
   e. Press the key next to NORMAL EP on the display.
   f. Press the BACK and HOME keys or press and hold the STOP key for 3-5 seconds to return to normal function.

2) Enter the serial number of the frame into the console. To do so:
   a. Press ENTER, 3, 0, 0, 1, ENTER on the upper keypad, Service Mode will appear on the display.
   b. Press the key next to SETUP on the display.
   c. Press the key next to SERIAL NUMBER on the display.
   d. Press the key next to PLATFORM on the display.
   e. Enter the last 8 digits of the serial # from the base frame of the unit (see Section 1.1 for serial number location).
   f. Press the key next to OK on the display to save the serial number.
   g. Press the BACK and HOME keys or press and hold the STOP key for 3-5 seconds to return to normal function.

3) Without hitting start or entering any exercise modes, stand on the machine and hold the handlebars while initiating movement to simulate exercising. While moving listen for any odd noises or squeaks.

4) After stopping movement, press the green GO key and begin using the machine.

5) Grasp the hand grips to check for proper heart rate response.

6) Press the LEVEL UP and DOWN keys both on the hand grips and on the console to make sure resistance is fully functional.

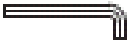
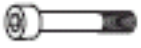
7) If everything functions properly, stop pedaling and the unit will reset to normal operation after 30 seconds.

CHAPTER 10: ELLIPTICAL TRAINER SPECIFICATIONS AND ASSEMBLY GUIDE

10.1 ELLIPTICAL TRAINER SPECIFICATIONS

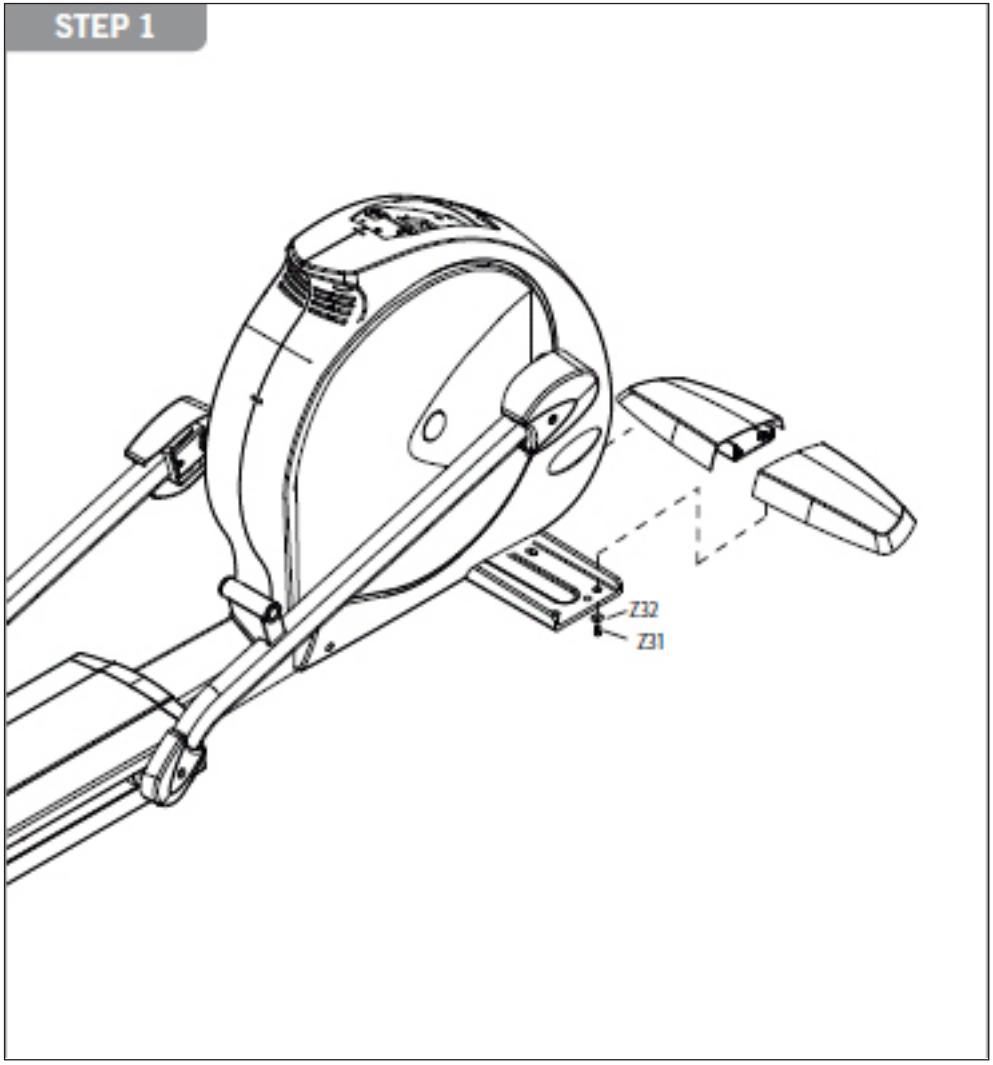
CONSOLE	
Display Type	7" LCD
Display Feedback	Time, Distance, Calories, Calories per hour, Speed, Heart Rate, METs, Watts, RPM, Profile
Programs	Manual, Rolling, Intervals, Fat Burn, Random, Fitness Test, Target HR, Constant Watts
Resistance Levels	25
Multi-language Display	Yes - English, German, French, Italian, Spanish, Dutch, Portuguese, Chinese, Japanese
CSafe, FitLinxx Ready	Yes
Integrated Vista Clear™ Digital Ready TV	Yes - 7" Screen Size
Wireless Data Transmitter	Yes
iPod Compatible	Yes
Nike + iPod Compatible	Yes
Personal Fan	Yes
TECHNICAL DATA	
Resistance Technology	JID Brushless ECB
Power Requirements0	Self Powered / 120V / 60Hz AC Power is Optional
Minimum Watts	22
Minimum RPM	N/A for powered / 25 for self powered
Overall Dimensions (L x W x H)	75.5" x 29" x 71" / 191.8 x 73.7 x 180.3 cm
Maximum User Weight	400 lbs / 181.4 kg
Unit Weight	310 lbs / 140.6 kg
Shipping Weight	350 lbs / 158.8 kg
Transport Wheel	Yes
USER DATA	
Stride Length	21
Contact Heart Rate Sensors	Yes
Telemetric Heart Rate Receiver	Yes
Cushioned Footpads	Yes
Q-Factor	3.5"
Handle Bar Design	Multi-position dual action and ergo bend stationary.
Thumb Switch Controls	Yes

10.2 FASTENERS & ASSEMBLY TOOLS

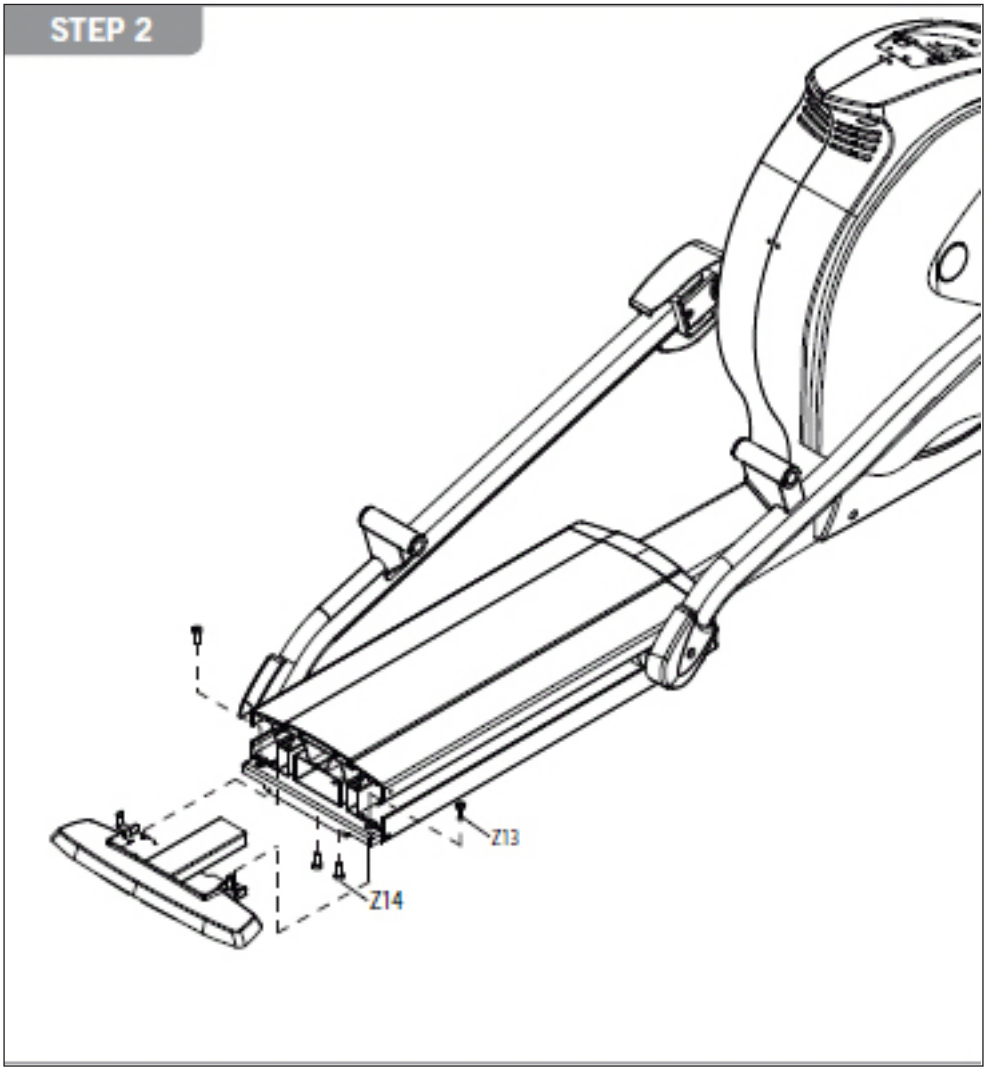
QUANTITY	PART #	SKETCH	DESCRIPTION	PACKAGE COLOR
01	Z11		PHILLIPS SCREWDRIVER	
01	Z12		13 MM OPEN WRENCH	
01	Z13		4 MM ALLEN WRENCH	
01			6 MM ALLEN WRENCH	
01			8 MM ALLEN WRENCH	
08	Z31		SOCKET HEAD CAP SCREW (M8 X 20L)	PINK
08	Z32		WASHER (8.4 X 15.5 X 1.6T)	PINK
08	Z13	SAME AS Z31	SOCKET HEAD CAP SCREW (M10 X 15L)	RED
10	Z03		SOCKET HEAD CAP SCREW (M5 X 10L)	RED AND YELLOW
02	Z14	SAME AS Z31	SOCKET HEAD CAP SCREW (M8 X 20L)	RED
04	Z01	SAME AS Z31	SOCKET HEAD CAP SCREW (M8 X 15L)	BLUE AND ORANGE
02	Z12	SAME AS Z31	SOCKET HEAD CAP SCREW (M8 X 25L)	BLUE
02	Z02		WAVE WASHER (20.5 X 29 X 1.5T)	ORANGE
02	Z08	SAME AS Z02	WAVE WASHER (20.7 X 29.1 X 1.5T)	ORANGE
08	Z09	SAME AS Z03	SOCKET HEAD CAP SCREW (M5 X 12L)	ORANGE
02	E42		CONNECT PLATE	ORANGE
02	Z05		SOCKET HEAD CAP SCREW (M8 X 55L)	YELLOW
02	Z06	SAME AS Z32	WASHER (8.2 X 16 X 1.0T)	YELLOW
02	Z07		NYLON NUT (M8 X 1.25P)	YELLOW
04	Z30		AXLE	YELLOW
04	Z04		SOCKET HEAD CAP SCREW (M8 X 65L)	GREEN
05	Z41	SAME AS Z31	SOCKET HEAD CAP SCREW (M5 X 8L)	

10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS

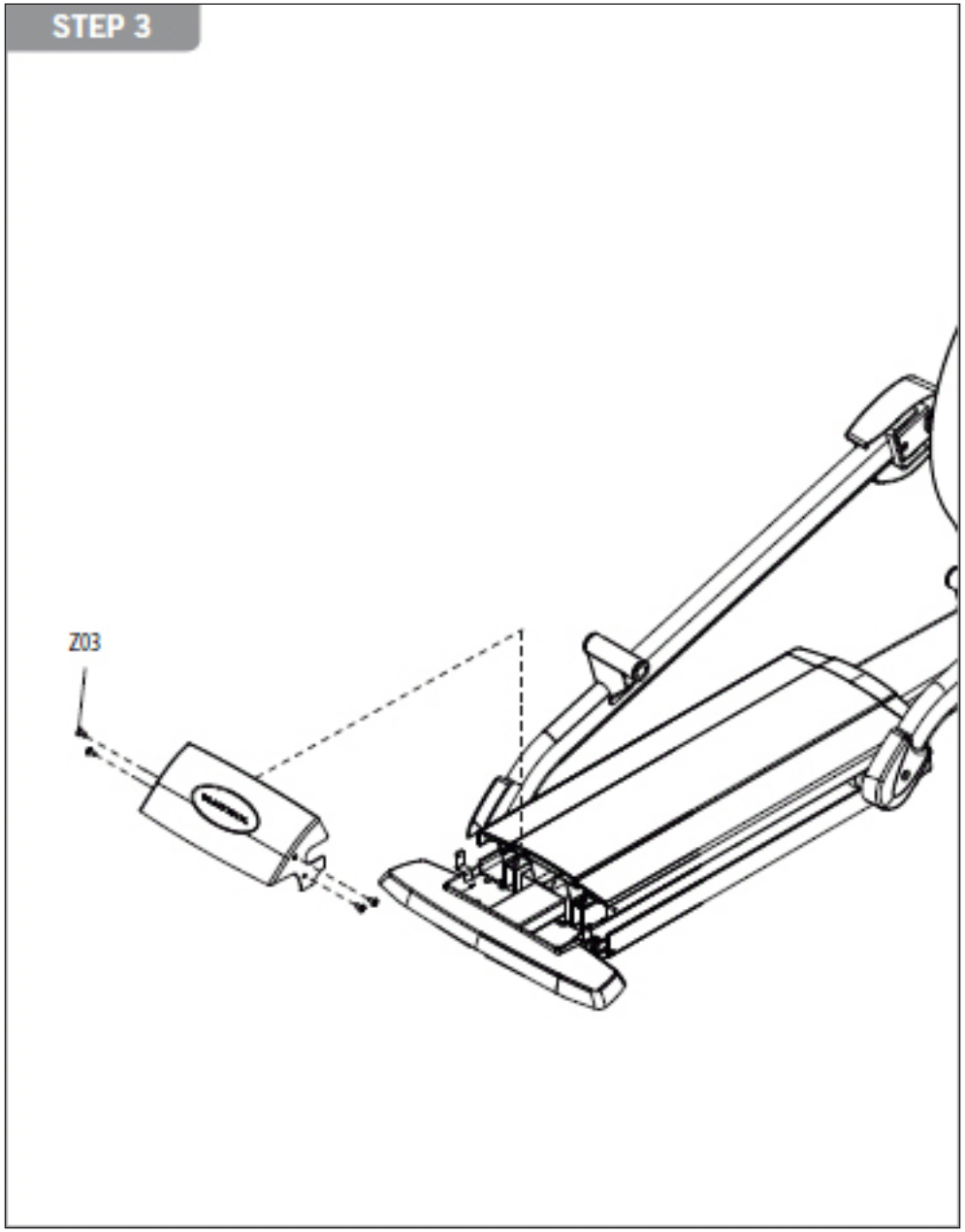
AFTER THESE ASSEMBLY STEPS ARE COMPLETE, BE SURE TO SETUP AND TEST THE UNIT AS OUTLINED IN SECTION 9.21.



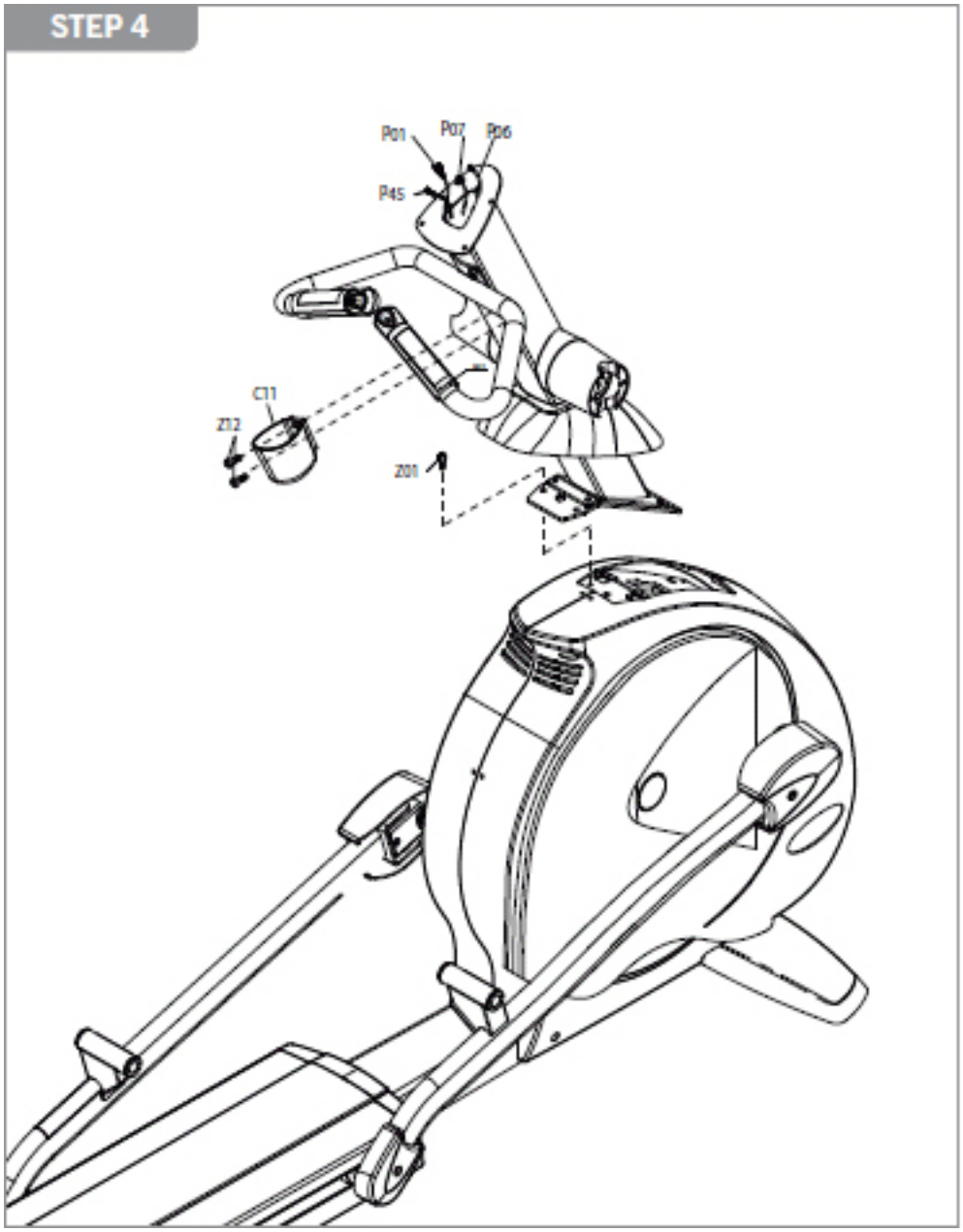
10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



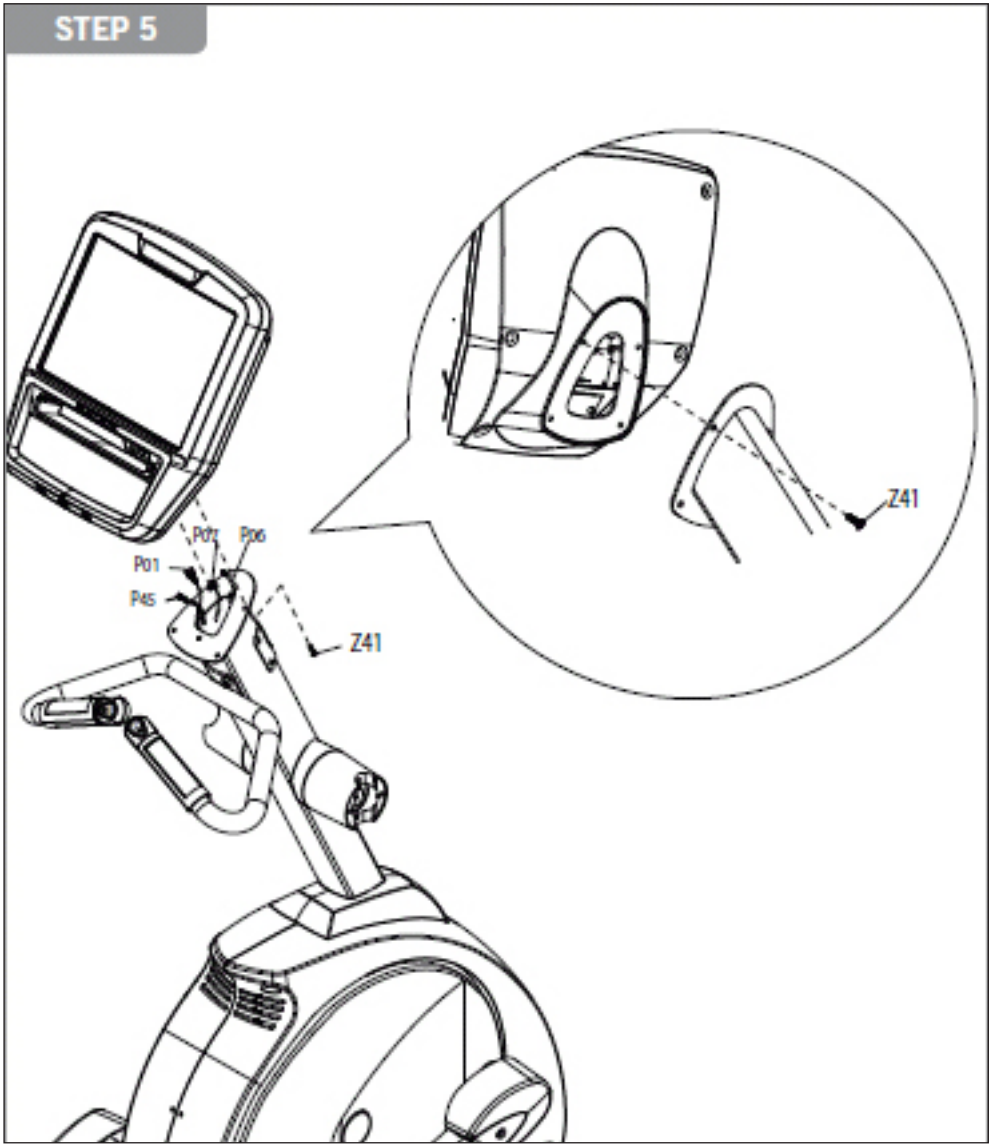
10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



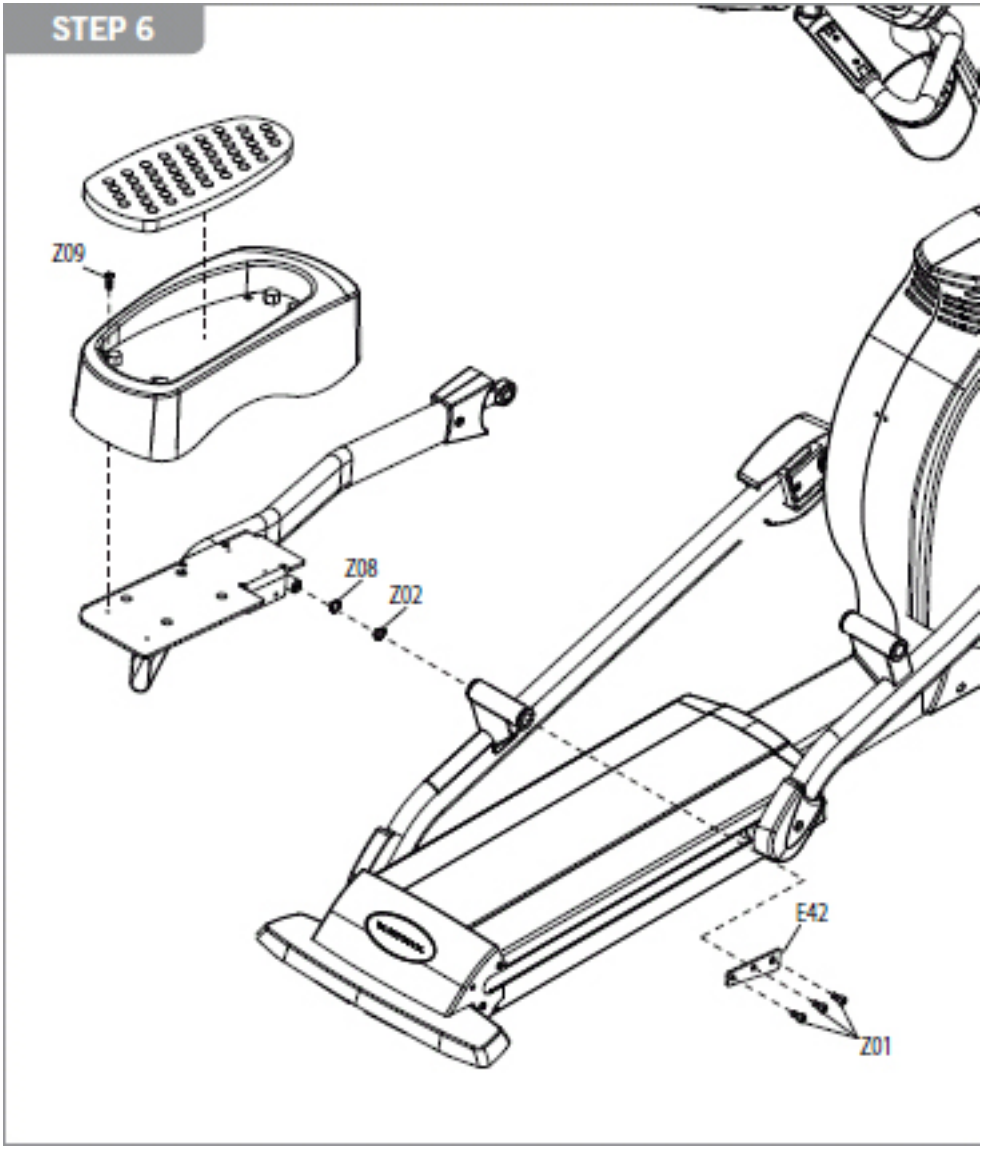
10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



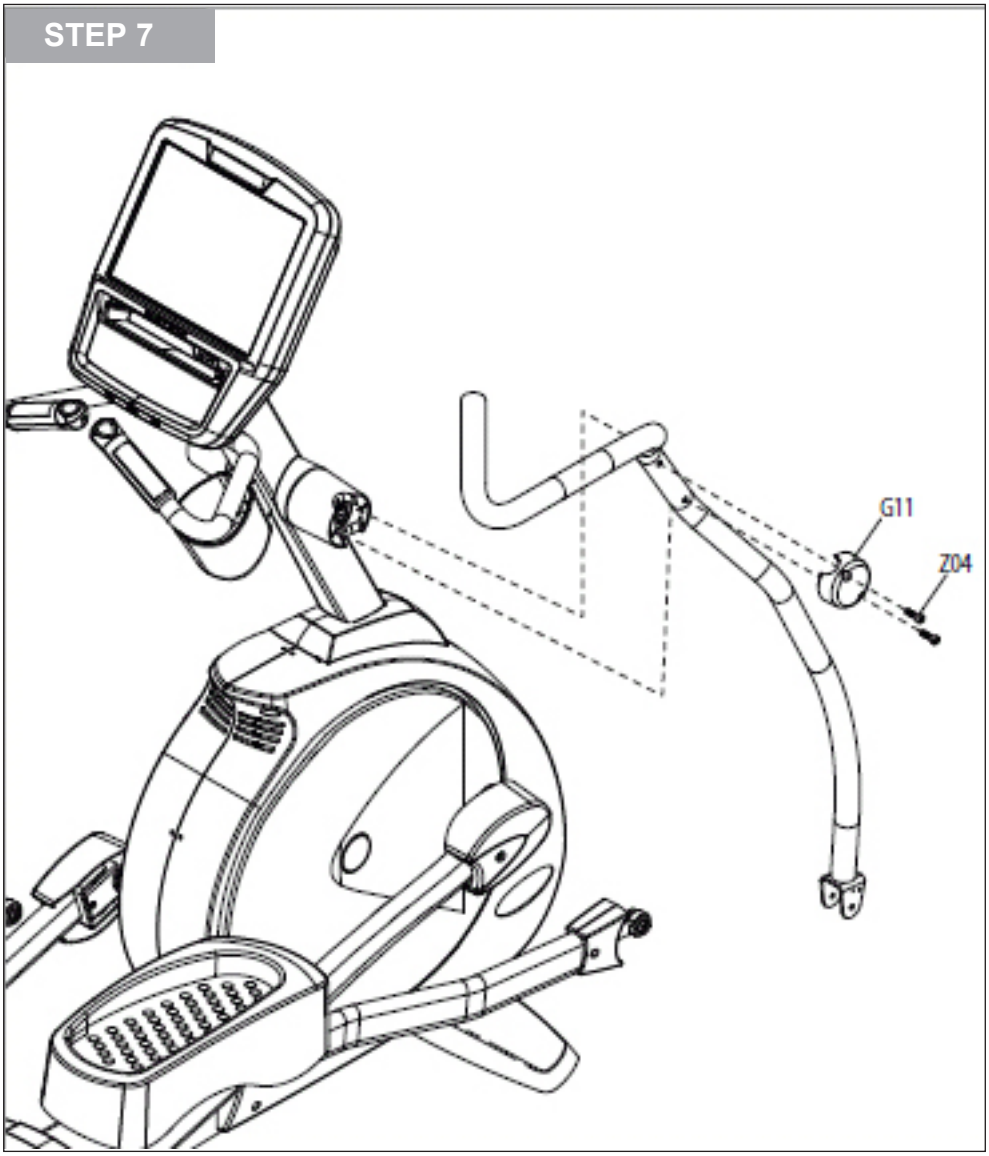
10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



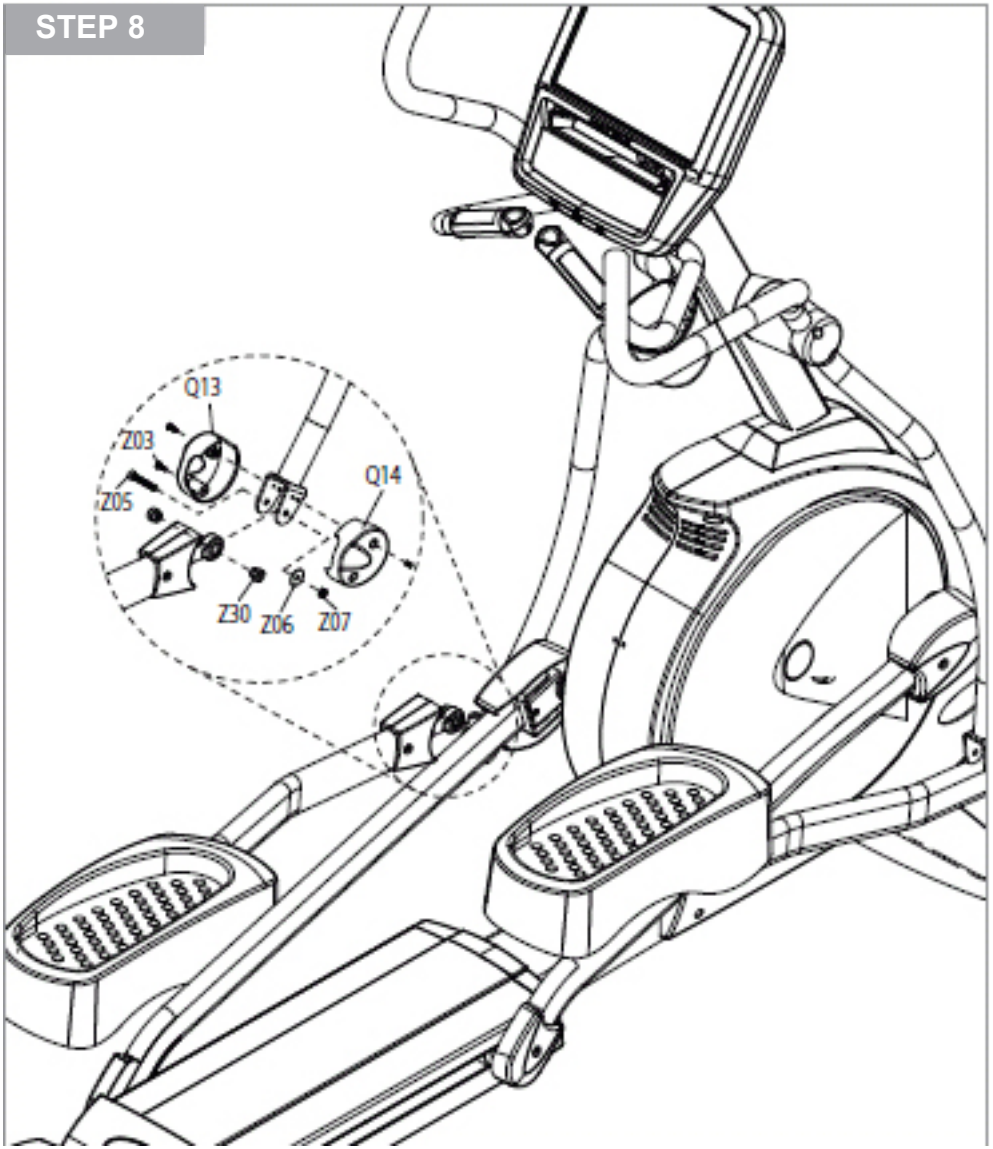
10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED

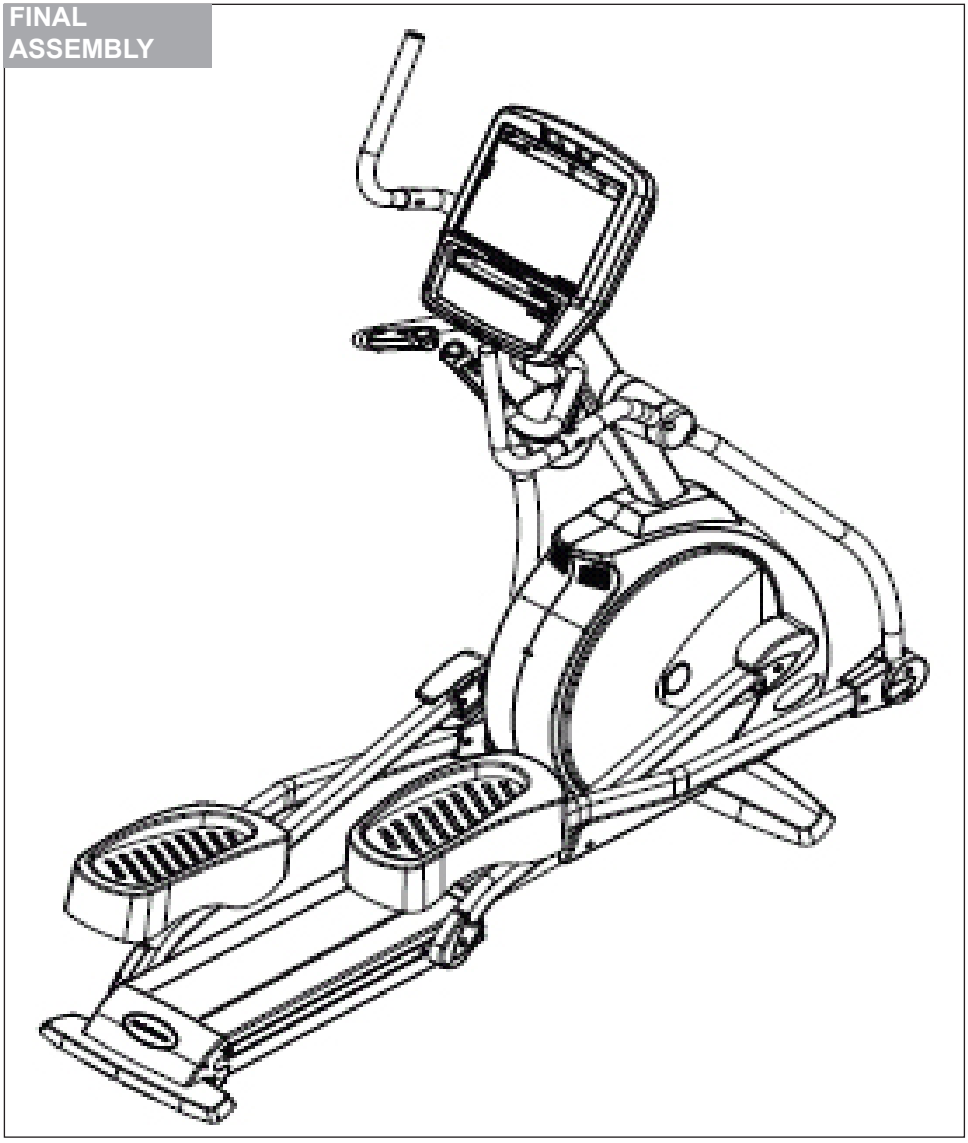


10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED



10.3 ELLIPTICAL TRAINER ASSEMBLY STEPS - CONTINUED

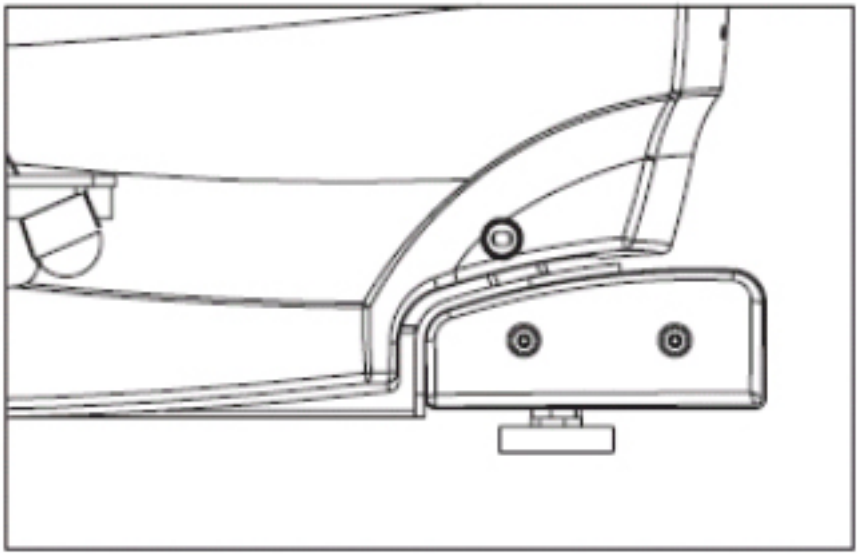
FINAL ASSEMBLY



10.4 LEVELING THE ELLIPTICAL TRAINER

STABILIZING THE ELLIPTICAL TRAINER

After positioning the elliptical trainer in its intended location, check its stability by attempting to shake it side to side. Shaking or wobbling indicates that your elliptical trainer needs to be leveled. Determine which leveler is not resting completely on the floor. Loosen the nut with one hand to allow the leveler to rotate. Rotate the left or right leveler, and repeat the adjustment as necessary until the elliptical trainer is stable. Lock the adjustment by tightening the nut against the rear foot support.



10.5 TV PROGRAMMING INSTRUCTIONS

1) Press ENTER, 1, 0, 0, 1, ENTER on the number keypad on the upper display and Manager Mode will appear on the display.
2) Press the key next to TV (Figure A), and then press the key next to CHANNEL SCAN (Figure B).

FIGURE A

FIGURE B

3) Press the - key on the number keypad and a Menu will appear on the TV (Figure C).
4) Use the volume keys to move horizontally in the Menu and the channel keys to move up or down. ***NOTE:*** You must press buttons quickly in the Menu or it will minimize within 5 seconds.
5) Move the cursor over to Channel on the top right of the Menu (Figure D).

FIGURE C

FIGURE D

10.5 TV PROGRAMMING INSTRUCTIONS - CONTINUED

6) Then go down to CHANNEL SCAN, use the volume button to select it (Figure E).
7) Move the cursor down to START TO SCAN and use the volume button to select it (Figure F).

FIGURE E

FIGURE F

8) If the channels are now coming in clearly, press the BACK key to return to normal operation (Figure G).
9) If the channels still are not coming in, or are showing in black and white, return to CHANNEL SCAN, and then change the CABLE SYSTEM to match your incoming cable frequency (Figure H). Re select START TO SCAN once this has been changed.

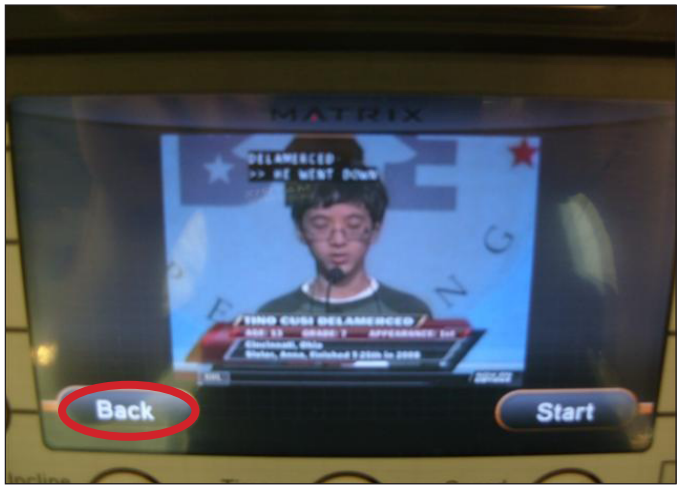


FIGURE G

FIGURE H

10) If the channels are still not coming in clearly, refer to the TV Troubleshooting in Sections 8.11.

CHAPTER 11: SOFTWARE UPGRADE PROCEDURE

11.1 SOFTWARE UPGRADE PROCEDURE

1) Copy three software files (7x deploy.cab, io.txt, and update.config) onto a USB drive.
2) Turn on the power to the elliptical trainer, and wait until the standby picture has been cleared (Figure A).
3) Insert the USB drive into the Reprogram Port in the back of the console back cover (Figure B).

FIGURE A

FIGURE B

4) The upgrade procedure will run automatically (Figure C).
5) When the update is complete, the display will prompt to remove the USB drive (Figure D).

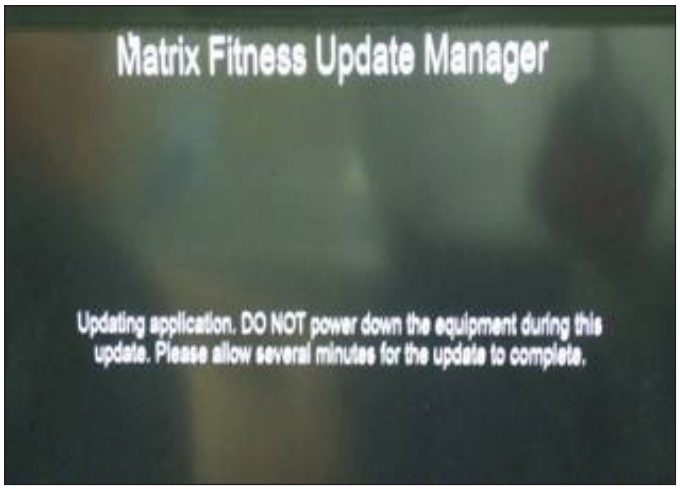

Matrix Fitness Update Manager
Updating application. DO NOT power down the equipment during this update. Please allow several minutes for the update to complete.

FIGURE C

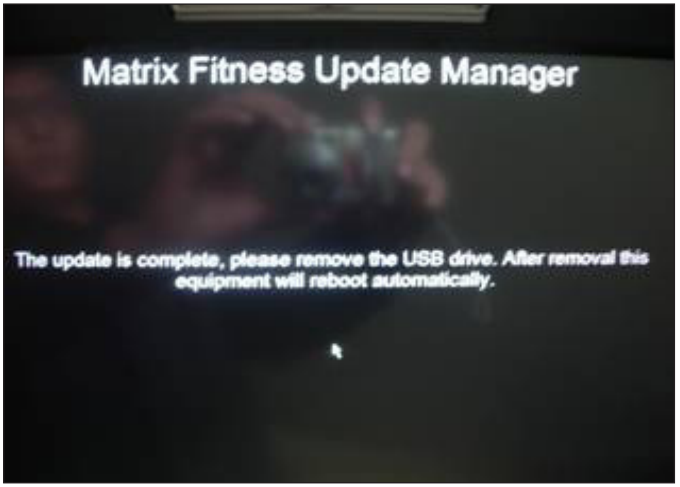

Matrix Fitness Update Manager
The update is complete, please remove the USB drive. After removal this equipment will reboot automatically.

FIGURE D

6) Power should cycle automatically once the USB drive is removed. Once the unit powers back up, test for function as outlined in Section 9.21.

NOTES

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